

Draft
For Limited Circulation

NATIONAL
POPULATION
EDUCATION
PROJECT

***RECONCEPTUALISED
POPULATION EDUCATION :
A TRAINING MATERIAL***



DEPARTMENT OF EDUCATION IN SOCIAL SCIENCES AND HUMANITIES
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P R E F A C E

Population education is a relatively new curricular concern entering the school education setting in India during early 1980s. A very significant feature of this area like certain other educational innovations has been its changing conceptual framework. Since the perception of population phenomenon has been changing, the need to bring about changes in the conceptual framework of population education has been felt at regular intervals. The first framework conceptualized in 1970s was demography-laden, which was reoriented during late 1980s as value-laden. However, the International Conference on Population and Development 1994 registered a marked shift in the perception of population phenomenon once again. Accordingly, population education framework was reconceptualised in 1996-98.

National Population Education Project

In order to ensure that education in population related issues was imparted to all the learners, it was essential to introduce population education in the existing educational system; and for doing so it was necessary to initiate steps in a project mode. Accordingly, a National Population Education Project was launched in India in 1980. Since then Project passed through four phases of its implementation up to 2002 and during every phase its thrusts, strategies and major activities have been different.

NPEP IN X Five Year Plan

The Government of India has decided to continue the National Population Education Project into the X Five Year Plan as an integral part of the ***Quality Improvements in Schools (QIS)*** of Ministry of Human Resource Development.

It will be funded by the Government of India and implemented in all the States and Union Territories of India. The National Council of Educational Research and Training will coordinate the implementation of the Project by national and state level implementing agencies.

The thrusts, objectives and strategies have been identified according to the recommendations of the *Working Group on Primary and Secondary Education in relation to Population Stabilisation* set up by the National Population Commission and the *Working Group on Adolescents* set up by the Planning Commission as preparatory steps and *Four Regional Seminars on Future Directions of Population Education* organized by NCERT during 2001. Major thrusts of the Project during the X Five Year Plan will be (i) integration of new population and development concerns such as *gender equality and equity; family: Its changing structures and roles; sustainable development; migration and urbanization*, (ii) integration of adolescence education encapsulating process of growing up, nutritional needs of adolescents, HIV/AIDS and drug abuse in the content and process of school education and teacher education; and (iii) *skill development* in adolescence education among learners. Whereas curricular and co-curricular approaches will continue to be employed, two new strategies identified for organizing of activities are (i) action-intensive strategy; and (ii) problem-specific strategy.

Training Materials

In view of the above, there is a need to train the Project Personnel in new dimensions of the Project during the X Five Year Plan and the emerging concerns of population education. There may also be the need to train or orient other Resource Persons in population education. With a view to meeting this requirement, the present training material has been prepared. The material is expected to meet the requirements of the project personnel who are responsible

for effective implementation of the Project, though it may be used for training/orientation of Resource Persons. With suitable adaptation it can be useful for teacher training programmes also. However, the *Training Programme Schedule* included here is meant for the training of project personnel only. The present volume contains the following sections and chapters.

SECTION . I KNOWLEDGE BASE : There are six Chapters in this section:

1. Population and Sustainable Development, 2. Gender Equality and Equity for Empowerment of Women; 3. Adolescence Education; 4. The Family: Socio-Economic Factors and Quality of Life; 5. Health, Nutrition And Education – Key Determinants of Population Change; and 6. Population, Distribution and Migration

SECTION . II PROJECT IMPLEMENTATION STRATEGIES: The second section also contains six Chapters: 1. Population Education : A Reconceptualised Framework, 2 Curriculum Development in Population Education; 3. Teacher Training in Population Education; 4. Co-Curricular Activities in Population Education; 5. Evaluation and Research in Population Education; and 6. Programme Management.

SECTION III APPENDICES This section has tools for Pre-Test and Post Test.

As is evident from the above, the present training material makes an attempt to cover various concerns of the knowledge base as well as the needed components of pedagogy. However, it may need further improvement. Comments and suggestions, therefore, are always welcome

NPEP TEAM

**TRAINING IN POPULATION EDUCATION FOR
STATE PROJECT PERSONNEL**

PROGRAMME SCHEDULE

| Activity/Coverage of Content Area | Time |
|---------------------------------------------------------------------------------------------------|-------------------------------|
| Needs Assessment Study on Trainees | One month before the Training |
| <u>DAY - 1</u> | |
| Pre-Test | 30 minutes |
| Briefing Session on Training Needs of Project Personnel | 45 minutes |
| National Population Education Project | 1 hour |
| Reconceptualized Framework of Population Education | 1 hour 30 minutes |
| Population Stabilisation and Sustainable Development | 1 hour 30 minutes |
| <u>DAY - 2</u> | |
| Gender Equality, Equity and Population Stabilisation | 1 hour 30 minutes |
| Material Development in Population Education | 1 hour 30 minutes |
| Integration of Population Education in School Curriculum | 1 hour 30 minutes |
| Practicum on Integration of Population Education in Syllabi and Textbooks | 1 hour 30 minutes |
| <u>DAY - 3</u> | |
| Family Changing Structures and Roles | 1 hour 30 minutes |
| Health & Nutrition Determinants of Population Stabilisation | 1 hour 30 minutes |
| Training in Population Education | 1 hour 30 minutes |
| Practicum on Development of Training Designs for Different Target Groups | 1 hour 30 minutes |
| <u>DAY - 4</u> | |
| Population Distribution Urbanisation and Migration | 1 hour 30 minutes |
| Education and Population Stabilisation | 1 hour 30 minutes |
| Co-curricular Activities in Population Education | 1 hour 30 minutes |
| Practicum on Detailing the Process of Conducting Co-curricular Activities in Population Education | 1 hour 30 minutes |

| Activity/Coverage of Content Area | Time |
|-------------------------------------------------------------------------------|-------------------|
| <u>DAY - 5</u> | |
| Research and Evaluation in Population Education | 1 hour 30 minutes |
| Practicum on Content Analysis of Syllabi and Textbooks | 1 hour 30 minutes |
| Monitoring of National Population Education Project (Academic) | 1 hour 30 minutes |
| Practicum on Preparing Activity-Linked Monitoring Schedule | 1 hour 30 minutes |
| <u>DAY - 6</u> | |
| Monitoring of National Population Education Project (Financial) | 30 minutes |
| Practicum on Filling in Financial Statements and Compliance to Audit Comments | 1 hour |
| Programme Management in Population Education | 1 hour 30 minutes |
| Use of Computer in Population Education and Practicum | 3 hours |
| <u>DAY - 7</u> | |
| Role of NGOs and Govt Organisations in Population Education | 1 hour 30 minutes |
| Role of Documentation & Dissemination in Population Education | 1 hour 30 minutes |
| Library Consultation | 3 hours |
| <u>DAY - 8</u> | |
| Conceptual Framework of Adolescence Education | 1 hour 30 minutes |
| Process of Growing Up | 1 hour 30 minutes |
| Educating Against Drug Abuse | 1 hour 30 minutes |
| HIV/AIDS Basic Information, Prevention and Control | 1 hour 30 minutes |
| <u>DAY - 9</u> | |
| Demonstration of Activities by Resource Persons | |
| - Question Box | 1 hour 30 minutes |
| - Value Clarification | 1 hour |
| - Role Play | 1 hour |
| Group Discussion | 1 hour |
| Planning Students' Activities for Demonstration in Schools | 1 hour 30 minutes |
| <u>DAY - 10</u> | |
| Demonstration/Practice by Trainees in Adolescence Education in Schools | |
| - Question Box | 1 hour |
| - Value Clarification | 1 hour |
| - Role Play | 45 minutes |
| Post-Test | 1 hour |
| Concluding Session | 1 hour |

SECTION : I

KNOWLEDGE BASE

- Chapter – 1 : Population and Sustainable Development**
- Chapter – 2 : Gender Equality and Empowerment of Women**
- Chapter – 3 : Adolescence Education**
- Chapter – 4 : Family : Socio-Economic Factors and Quality of Life**
- Chapter – 5 : Health, Nutrition and Education : Key Determinants
of Population Change**
- Chapter – 6 : Population Distribution : Urbanisation and Migration**

CHAPTER - 1

POPULATION AND SUSTAINABLE DEVELOPMENT

The World Population stands at 6 billion as on 12 October 1999 and is expected to cross 8.5 billion by 2025 and further soar to 10 billion by 2050. Every year 85 million people are being added to world population, of which 18 million are being added by India alone. At the same time, life expectancy is rising steadily, urbanization is on the rise and the proportion of aged people is rising steadily.

Large population has implications for the quality of life, as the basic needs of food, clothing, shelter, and infrastructure have to be provided for a larger number of people. For instance, even as total food grain production has increased but the per capita availability has not kept pace with it. Similarly, urbanization has implications for providing for the needs of urban infrastructure as well as for environmental quality. Rapidly aging population increases the dependency burden, implying that productive people have to support a larger number of people. Rising life expectancy implies a longer effective population since people live longer and consume resources for a longer period of time.

While population growth rate in most parts of the developing world is started declining, the per capita consumption of resources in developed countries is 15 times more than the former. Per capita consumption levels have, therefore, also an important role in sustainable development. What is needed is to focus on achieving the conditions which would help countries to achieve sustainable development by stabilising population on one hand and promoting efficiency of resource utilization and the use of eco-friendly technology on the other. Finally, values and institutions determine how resources are used and thus affect this relationship also.

Meaning of Sustainable Development

While 'Growth' refers to expansion of physical dimensions of economic systems, development refers to the qualitative changes of the expansion of economic system in a state of dynamic equilibrium maintained by environment. For a long time it was believed that 'growth' is a process and its benefits trickle down to all income-classes. But experience teaches otherwise. Thus the concept of "growth" has been replaced by the concept of "development" which denotes broadly "growth with social justice". Thus, the earth should not only grow but it should develop. Growth should not be merely for the sake of physical growth but social aspect should be an integral part of the development strategy.

Development provides a social, economic, political and cultural framework that is conducive to individual development. Characteristics of social development include a well established and smoothly operating political organizations and public administration service, social security, employment, health care, education and social equality. Individual development, as defined by Human Development Report, 1995 should have three essential components. These are as follows:

- (i) equality of opportunity for all people in society
- (ii) sustainability of such opportunities from one generation to the next.
- (iii) empowerment of people so that they participate in the development process and share the benefits too

Moreover, equal enjoyment of human rights for women and men has been universally accepted in all areas of life and home.

Development process is thus an integration among three distinct systems: a biological system, a social system and an economic system. This process of integration should be such that can be sustainable.

Brundtland Commission, 1987 defined "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Thus in a society that

strives for sustainable development, the rate of exploitation of resources should not exceed the rate of replenishment of these resources. The rate at which the non-renewable resources are being exploited should not exceed the rate at which these non-renewable resources are being replaced by renewable resources. Moreover, the degree of environmental pollution should not exceed the pollutant neutralizing capacity of the natural environment. Sustainable development should also focus on factors like health care, education and social well being which are critical to early population stabilisation.

As per Programme of Action, ICPD 1994 sustainable development as a means to ensure human well being, equitably shared by all people today and in the future, requires that the interrelationships between population, resources, the environment and development should be fully recognized, properly managed and brought into harmonious dynamic balance. To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate policies, including population-related policies, in order to meet the needs of current generations without compromising the ability of future generations to meet their own needs (UNFPA, 1996).

Increasingly, definitions of sustainable development cut across several aspects or dimensions. Sustainable development is thus a process requiring simultaneous progress in human, economic, environmental and technological dimensions at individual, societal, national and global levels. It should focus on improving the quality of human life within the carrying capacity of supporting eco-system.

All countries are different in the conditions of life and in outlook. On closer examination, we generally divide them into rich and poor in a simplistic manner. But in reality, each country has multiplicity of conditions which need to be reflected while discussing sustainable development. Sustainable development also means different thing for a village than to a mega city. Broadly the following dimensions of sustainable development are discussed here.

Human Dimension

As we all know that we inhabit a single planet but several worlds. There is a world of abundance where plenty brings pollution. There is a world of want where deprivation degrades life. The overwhelming reality that must be faced is that the resources of our planet would be able to sustain a given population with a given rate of regeneration and maintenance for all time to come. In other words, any imbalance in any one or more of the above viz. population, life style and extent of exploitation, regeneration and maintenance - is sure to cut the life of the planet. Sustainable development requires significant progress towards stable population. Growth of human population, for long, puts strains on natural resources and services required to support the life of the people. Let us see the population scenario at the global and national levels.

Population at Global Level

After the Second World War, the world has witnessed unprecedented population growth particularly in less developed countries. The world population was half a billion by A.D. 1650. It took 200 years to become 2 billion i.e. in 1850. But it took only 100 years to become 3 billion, 45 years to 4 billion in 1975 and just 12 years to reach 5 billion and another 12 years to become 6 billion as on 12 October 1999. The latest figures as revealed by the State of World Population 2002 that world population has already reached 6.2 billion as on 2002. While the population of less developed regions is 4.7 billion, the more developed regions have a population of only 1.19 billion. The Report projects 1.2 per cent growth rate of population during 2000-2003. While the more developed regions will have 0.2 per cent growth rate, the less developed regions will have 1.5 per cent growth rate of population during the same period. The world is observing a decline in growth rate of population. The slowing of the population growth rate is mainly due to sharp decline in total fertility rate which is currently 2.68 children per woman in the world. There is substantial reduction in IMR estimated 55 per thousand live births from 66 live births a decade ago. There is a corresponding

rise in expectancy of life at birth reaching 63.9 years for male and 68.1 years for females. However there are variations in the developed and developing regions of the world, which can be observed in these indicators as depicted in Table-1.1 below:

TABLE – 1.1 : DEMOGRAPHIC SCENARIO OF INDIA AND THE WORLD

| REGION/ COUNTRY | Total Population (million) 2002 | Average Growth Rate (%) (2000-05) | Total Fertility Rate (2000-05) | Infant Mortality Rate (2000-05) | Life Expectancy (in yrs.) | |
|--------------------------|---------------------------------------|--------------------------------------------|--------------------------------------|---------------------------------------|------------------------------|--------|
| | | | | | Male | Female |
| WORLD | 6211.1 | 1.2 | 2.68 | 55 | 63.9 | 68.1 |
| More Developed Region | 1196.0 | 0.2 | 1.50 | 8 | 71.9 | 79.3 |
| Less Developed Region | 5015.1 | 1.5 | 2.92 | 59 | 62.5 | 65.7 |
| Asia | 3768.6 | 1.3 | 2.54 | 53 | 65.8 | 69.2 |

Source i) *The State of World Population, 2002, UNFPA*

Though approximately 90 per cent of the births over the next 100 years will occur in the developing world. Due to this continued decline in growth rate, the number of people added yearly to the world's population after 2000 will become progressively smaller until the population eventually stabilizes at 12.5 billion around 2150.

The Table -1 2 below shows the population of top 10 countries of the world in 2002 and would be in 2050. As projected, it may happen that India replaced China in 2050 in terms of absolute number of people.

TABLE - 1.2 : TOP TEN COUNTRIES BY POPULATION SIZE

| <u>2002</u> | | <u>2050</u> | |
|--------------------|---------------------------------|--------------------|-------------------------------------------|
| COUNTRY | POPULATION (million) | COUNTRY | PROJECTED POPULATION (million) |
| China | 1294.4 | China | 1462.1 |
| India | 1041.1 | India | 1572.1 |
| USA | 288.5 | USA | 397.1 |
| Indonesia | 217.5 | Indonesia | 311.3 |
| Brazil | 174.7 | Brazil | 247.2 |
| Russia | 143.8 | Russia | 104.3 |
| Japan | 127.5 | Japan | 109.2 |
| Pakistan | 148.7 | Pakistan | 344.2 |
| Bangladesh | 143.4 | Bangladesh | 265.4 |
| Nigeria | 120.0 | Nigeria | 278.8 |

Source The State of World Population, 2002, UNFPA.

Dependency ratios in the developing and developed world differ substantially with varying implications for policies and programmes. In the developing world 35 per cent of the population is under 15. They need more schools and other services geared toward youth and their eventual entry into productive life predominates. On the contrary, in the developed world only 19 per cent of the population is under 15, while 14 per cent is of 65 and above. In these regions, meeting the needs of rapidly aging population is of great concern. While most countries in the developing world still have young population, the world is slowly getting older. The median age in the world which was 21.6 years in 1970 has slowly increased, reaching 22.6 in 1980, 24.2 in 1990 and 25 in 1999.

Trends in Indian Population Situation

India is a nation of a billion people. As on 11 May 2000, one-billionth child was born in India. India is one of the second most populous countries of the world. India adds about 18 million additional number every year. The Table - 1.3 reveals the demographic scenario of India's population:

TABLE – 1.3 : POPULATION OF INDIA 1901-2001

| YEAR | Population (in million) | Decadal growth rate (in percentage) | Average annual exponential growth rate (in percentage) |
|------|----------------------------|-------------------------------------------|--------------------------------------------------------------|
| 1901 | 238.4 | - | - |
| 1911 | 252.1 | + 5.8 | 0.56 |
| 1921 | 251.3 | - 0.3 | - 0.03 |
| 1931 | 279.0 | + 11.0 | 1.04 |
| 1941 | 318.7 | + 14.2 | 1.33 |
| 1951 | 361.1 | + 13.3 | 1.35 |
| 1961 | 439.2 | + 21.5 | 1.96 |
| 1971 | 548.2 | + 24.8 | 2.20 |
| 1981 | 683.3 | + 24.7 | 2.22 |
| 1991 | 846.3 | + 23.5 | 2.11 |
| 2001 | 1027.0 | + 21.3 | 1.73 |

Source Census of India 1991-2001 and UN estimates.

Population of India – 2001 Census Results and Methodology by Ashish Bose

Indian population constitutes 16 per cent of the world population living on 2.4 per cent of world land area. Still 36 per cent of the population is below 15 years of age. Universality of marriage, low age at marriage and early childbearing result in high infant and maternal mortality rates in India.

India is a country of demographic diversity. Broad comparison among States/UTs helps to bring out enormous variations in basic demographic indicators important for planning programmes and activities. The most recent data on growth rate of population for the year 2001 released by the Registrar General, India, still confirm the diagnosis of India's population problem in terms of the four States, namely, Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh (Table –1.4). These four States have the highest birth rates and

consequently the highest growth rates in India. Kerala and Tamil Nadu have the lowest birth rates. Both Madhya Pradesh and Orissa have the highest death rates in India. The thrust surely has to be on these four States that account for 40 per cent of India's population and according to projections, this proportion will increase for some time.

TABLE – 1.4 : BIRTH, DEATH AND NATURAL GROWTH RATE IN MAJOR STATES, 1999

| India/States | Birth Rate (per 1000) | Death Rate (per 1000) | Natural Growth Rate (per cent) |
|---------------------|--------------------------|--------------------------|-----------------------------------|
| INDIA | 26.1 | 8.7 | 1.74 |
| 1. Uttar Pradesh | 32.1 | 10.5 | 2.16 |
| 2. Rajasthan | 31.1 | 8.4 | 2.27 |
| 3. Bihar | 30.4 | 9.1 | 2.14 |
| 4. Madhya Pradesh | 30.7 | 10.6 | 2.01 |
| 5. Assam | 27.0 | 9.7 | 1.73 |
| 6. Haryana | 26.8 | 7.7 | 1.91 |
| 7. Orissa | 24.1 | 10.6 | 1.34 |
| 8. Gujarat | 25.4 | 7.9 | 1.76 |
| 9. Himachal Pradesh | 23.8 | 7.3 | 1.64 |
| 10. Punjab | 21.5 | 7.4 | 1.41 |
| 11. Maharashtra | 21.1 | 7.5 | 1.36 |
| 12. Andhra Pradesh | 21.7 | 8.2 | 1.35 |
| 13. Karnataka | 22.3 | 7.7 | 1.46 |
| 14. West Bengal | 20.7 | 7.1 | 1.36 |
| 15. Tamil Nadu | 19.3 | 8.0 | 1.13 |
| 16. Kerala | 18.0 | 6.4 | 1.16 |

Source: *Vital Statistics SRS 1999*

Ashish Bose, Population of India-2001 Census Results and Methodology, Delhi, 2001

In Table - 1.5, we turn to another sensitive indicator: Rural Infant Mortality Rate (IMR), the picture in BIMARU states is indeed grim. Orissa has the highest rural Infant Mortality Rate (100).

TABLE – 1.5 : RURAL INFANT MORTALITY RATES, 1995-99

| RANK INDIA/STATES | 1995 | 1996 | 1997 | 1998 | 1999 |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|
| INDIA | 80 | 77 | 77 | 77 | 72 |
| 1. Madhya Pradesh | 104 | 102 | 99 | 103 | 96 |
| 2. Orissa | 107 | 99 | 100 | 101 | 100 |
| 3. Uttar Pradesh | 89 | 88 | 89 | 89 | 87 |
| 4. Rajasthan | 90 | 90 | 89 | 87 | 85 |
| 5. Assam | 78 | 79 | 79 | 82 | 79 |
| 6. Andhra Pradesh | 74 | 73 | 70 | 75 | 75 |
| 7. Haryana | 70 | 70 | 70 | 72 | 70 |
| 8. Gujarat | 68 | 68 | 69 | 71 | 70 |
| 9. Karnataka | 69 | 63 | 63 | 70 | 69 |
| 10. Bihar | 74 | 73 | 73 | 68 | 67 |
| 11. Himachal Pradesh | 63 | 63 | 64 | 66 | 63 |
| 12. Maharashtra | 66 | 58 | 56 | 58 | 58 |
| 13. Punjab | 58 | 54 | 54 | 58 | 57 |
| 14. Tamil Nadu | 61 | 60 | 58 | 58 | 58 |
| 15. West Bengal | 61 | 58 | 58 | 56 | 55 |
| 16. Kerala | 16 | 13 | 11 | 15 | 14 |

Source Registrar General, India, SRS, Bulletin, October 1999 Vital Statistics, SRS, 1999.

Demographers consider TFR (Total Fertility Rate) as a better measure than the crude birth rate. The TFR refers to the average number of children born per woman during her reproductive life, given the present fertility pattern.

The NFHS-2 data also fully confirm our diagnosis in terms of BIMARU States as the TFR is highest in these four states.

Madhya Pradesh and Rajasthan, however, of late have shown some dynamism on the demographic front.

TABLE - 1.6 : TOTAL FERTILITY RATE (TFR), 1998-99 (TFR 15-49 YEARS)

| STATES | URBAN | RURAL | TOTAL |
|----------------------|-------|-------|-------|
| 1. Uttar Pradesh | 2.88 | 4.31 | 3.99 |
| 2. Rajasthan | 2.98 | 4.06 | 3.78 |
| 3 Bihar | 2.75 | 3.58 | 3.49 |
| 4. Madhya Pradesh | 2.61 | 3.56 | 3.31 |
| 5. Haryana | 2.25 | 3.13 | 2.88 |
| 6 Gujarat | 2.33 | 3.01 | 2.72 |
| 7. Maharashtra | 2.24 | 2.74 | 2.52 |
| 8. Orissa | 2.19 | 2.50 | 2.46 |
| 9. Assam | 1.50 | 2.39 | 2.31 |
| 10. West Bengal | 1.69 | 2.49 | 2.29 |
| 11. Andhra Pradesh | 2.07 | 2.32 | 2.25 |
| 12. Punjab | 1.79 | 2.42 | 2.21 |
| 13 Tamil Nadu | 2.12 | 2.22 | 2.19 |
| 14. Himachal Pradesh | 1.74 | 2.18 | 2.14 |
| 15. Karnataka | 1.89 | 2.25 | 2.13 |
| 16. Kerala | 1.51 | 2.07 | 1.96 |

Source: Compiled from preliminary reports of NFHS-2, 2000 (International Institute for Population Sciences, Bombay, 2000)

There are four distinct periods in the pattern of population growth in India. The first is between 1901-21 when the population remained almost stationary

with both the birth and death rates at very high levels of 45 and over per 1000 population

The year 1921 is a year of the great divide in the demographic history of India when mortality started to decline leading to acceleration in the rate of population growth. The next three decades 1921-51 represent the second period of population growth when the rate of population growth continued to be high. The slight dip in the growth rate in 1941-51 partly reflects the Bengal famine of 1942-43 and dislocations due to the partition of India in 1947

The period 1951-81 is the third period in the history of population growth in India when the rate of population growth accelerated to a little over two per cent per annum because of sharper declines in mortality due to success of public health measures in the post independence period. The rate of population growth was at its peak in the period of 1961-81 with population growing at the rate of 2.2 per cent per annum.

The decade 1971-81 becomes a turning point in the history of fertility in India when it started declining and continued every year thereafter. In the decade 1981-91 it declined from 2.2 per cent per annum to 2.1 per cent. Though the decline is a welcome sign, the pace of decline is slow and not enough from the point of view of social and economic development. Another feature of the growth of population in India is the increase of its absolute size. In the last decade of 1991-2001, we have added 180.6 million people though the growth rate continue to decline to 1.73 per cent.

Another significant feature of Indian population situation is the growing disparity between the BIMARU States and Southern States in terms of decline in fertility and other demographic indicators.

Behind this dismal picture, there is a silver lining. The situation seems to be improving, considering the following indicators:

- The crude birth rate, a measure of babies born per 1000 population, declined from 39.9 in 1951 to 26.1 in 1999. The crude death rate declined from 27.4 to 8.7 per 1000 population in the same period (SRS 1999).

- The infant mortality rate, a measure of infant death in the age group of 0-12 months per 1000 live births every year, declined from 129 in 1971 to 70 in 1999.
- Life expectancy at birth went up from 32.4 years for men and 31.7 years for women in 1941-50 to 62.3 years for men and 62.9 years for women in 1999.
- The percentage of couples protected by some form of contraception went up from 10.4 per cent in 1971 to 48 per cent in 1998-99 as per NFHS-2.
- The total fertility rate, a measure of average number of children per women, fell from 5.2 in 1972 to 2.85 as per NFHS-1998-99.
- The annual growth rate of population in 1991 was 2.1 per cent, which has declined to 1.73 per cent in 1999.
- The mean age at marriage in India also rose from 21.3 to 24.3 between 1961 to 1992 for men and from 16.1 to 20.2 for women in the same years.

Along with all these indicators, sustainable development requires full use of human resources by improving education and health services and by combating hunger. It also means redirecting or reallocating resources to ensure that basic human needs, such as food, shelter, literacy, primary health care and safe water are fulfilled first. Beyond basic needs, sustainable development means improving social well being, protecting cultural diversity and investing more and more in human capital. It is also seen that a population healthy and well fed and better educated assist in sustainable development.

Economic Dimension: Reduction in Social Inequalities and Deepening Poverty

Another important dimension of sustainable development is the economic dimension of development. Economic growth is occurring all over the world but at the same time poverty, social inequalities and disparities also growing worse. In South Asia alone, 62 per cent of the world's poor live. Social inequality and

problems related to unemployment and poverty have worsened in the developed countries as well. The European countries, despite being having only 20 per cent of the world population and with some 80 per cent of the world resources, have 50 million people living in poverty. In 1990 about 2 billion people in the world were subsisting on the equivalent of US\$ 2 a day or less. By 2000 the number had risen to about 3 billion i.e. half of the world population (Population Report 2001). Poverty is often accompanied by unemployment, malnutrition, illiteracy, low status of women, exposure to environmental risks and limited access to social and health services including reproductive health services. All these factors contribute to high levels of fertility, morbidity and mortality as well as low economic productivity. Poverty is also closely related to inappropriate distribution of population, to unsustainable use and inequitable distribution of such natural resources (as land and water) and to environmental degradation.

According to Government of India estimates, 26 per cent of the people in India are living below the *poverty line**. However, independent researchers put this figure at 41 per cent. Poverty makes people vulnerable to every situation. It limits the access to basic services such as health and education for a vast segment of the population. Although the goal of government is to provide free health care for all citizens, these vital services are not available in many areas of the country. Even though primary education is free, poor families cannot afford the cost of uniforms and school supplies. Poverty is both the cause and effect of low standard of living. Sustained economic growth within the context of sustainable development is essential to eradicate poverty. People whose basic needs are unmet and whose survival may be in doubt do not perceive any future action particularly in the context of sustainability. They rather tend to have more

* Alternative Economic Survey 1995-96, Delhi Science Forum. The poverty line is defined by the income level required to buy 2,400 calories worth of foodstuffs per capita per day in rural areas and 2,100 calories in urban areas. Both the Government of India figures as well as the estimates given in the Alternative Economic Survey are based on the 1993 report of the Expert Group on Estimation of the Proportion and Number of Poor appointed by the Planning Commission. The Government of India figure is calculated on the basis of poverty line cut-off for 1993-94 of Rs 229 and Rs 264 per capita per month for rural and urban areas respectively. The figure is derived at by upgrading the 1973-74 poverty line according to changes in the price index. However, these monthly amounts no longer correspond to a consumption of 2,400 and 2,100 calories as per poverty line definition. This is because the consumption basket has changed in favour of non-food items (an important one of which is transportation), and within food, items in favour of on-cereal foods. The relative prices of these items have increased more than proportionally. Thus, because of a behaviour change among the poor population the poverty line has been pushed upwards.

children in an effort to increase the family labour force and provide security for their old age. Eradication of poverty will contribute to slowing population growth and to achieving early population stabilization. Sustainable development requires human basic needs of all people within a society such as food, safe water, sanitation, education and other infra-structural facilities should be fulfilled. Equal access to education, social services, and natural resources and to freedom of choice to all people within a society stimulate development and economic growth needed to improve living standards.

In such circumstances for achieving sustainable development, growth must be in consultation with economic and social forces, be combined with equity and democracy. Its meaning thereby is that just as equity cannot be achieved without solid and sustained growth, growth demands a reasonable degree of socio-political stability, which itself is the requirements of equity.

Population, Environment and Resources Interrelationships

The interrelationships between population, resources and environment are very complex. Meeting the basic needs of growing population depends on a healthy environment. Demographic factors, combined with poverty and lack of access to resources in some areas and excessive consumption and wasteful production patterns in others cause problems of environmental degradation and resource depletion and thus inhibit sustainable development (UNFPA, 1996).

The three components of natural environment available to mankind are land, water and air. Land contains forests, minerals, diverse flora and fauna and is used for shelter, agriculture and other human activities. Water is needed for drinking and other domestic uses, irrigation, and industry including transport. The role of water-bodies in the rhythm of seasons and climate is crucial. Similarly, the importance of atmosphere and the air that we breathe is well known for the evolution and survival of living species. The importance of fresh and clean drinking water and clean air is emphasized in maintaining good health.

It is stressed that the presently known reserves of iron ore, aluminum, and oil will last for one or two centuries at current depletion rates.

While thinking in terms of a sustainable future, the prospect of available resources, non-renewable necessary for man, lasting for another 100 or two 200 years is of great concerns. As it took a few million years for humankind to evolve quantitatively and qualitatively, in view of the rate at which resources are exploited and the prospect of a doubling of the world population, a hundred years of supplies is hardly sufficient. The question of replacing non-renewable resources by alternative resources is of particular interest in this context.

Shortage of resources as a result of damage to ecosystems can seriously disrupt both short-term development and long-term sustainability. It should be noted that such resource shortages and the resulting impact on the environment occur first of all in developing countries. Water shortage constraints are becoming a major development problem. By the end of century, all five countries in North Africa and six out of seven in East Africa will experience severe water shortages. The availability of fresh water which is renewed annually will also decrease during the coming decades. The Table below shows the per capita availability of water and land.

TABLE - 1.7 : PER CAPITA AVAILABILITY OF WATER AND LAND (1990-2025)

| REGIONS | Cropland Available per capita (in hectares) | | Annual Renewable Fresh Water available per capita (cubic metres) | |
|----------------------------------|------------------------------------------------|------|------------------------------------------------------------------------|--------|
| | 1990 | 2025 | 1990 | 2025 |
| WORLD | 0.26 | 0.16 | 9,255 | 5,896 |
| Africa | 0.29 | 0.13 | 5,532 | 2,86 |
| Europe | 0.40 | 0.37 | 8,699 | 7,918 |
| North America | 0.84 | 0.63 | 19,464 | 4,211 |
| Latin America & the Caribbean | 0.35 | 0 22 | 29,818 | 8,359 |
| Asia | 0.15 | 0.09 | 4,767 | 3,031 |
| Oceania | 2.45 | 1.69 | 36,244 | 25,960 |
| India | 0.20 | 0.12 | 2,451 | 1,498 |

Source Population Reference Bureau. *Population Environment Dynamics, Data Sheet, Oct.1997*

The soil fertility is directly connected to the diversity of human life. Human activities affect the world's soil resources, depleting their productive capacities and their long-term ability to support the biosphere. Population growth serves to induce the farmers to over-use and exhaust the soil.

The process of desertification is the most severe form of land degradation. One of the main causes of desertification is over-grazing by domestic livestock. Deforestation, over-cultivation of marginal lands and salinizations caused by poorly managed irrigation are also the major causes as well. While the importance of the forest eco-systems for life on earth is beyond any doubt, tropical deforestation accounts for 25 per cent of the net warming effect of all greenhouse gas emissions.

It is very much desirable that natural resources are conserved and managed wisely to avoid their wastage or over utilization. The conservation and efficient utilization of living and non-living resources is vital for meeting the demands of the growing population. To bring about the qualitative change in the environment, massive afforestation and replantation in water land and production of fuel wood, fodder and growing of multi purpose trees are being emphasized. Conservation of wild areas along with inherent diversity of their plants, animals, insects and microorganism is vital for sustainable development. Enlightened opinion and active involvement of people is necessary to achieve this.

Role of Consumption, Technology and Urbanization

The different levels and ways of consumption in developed and developing countries is a crucial element in the relationship between population and development. Over a period of only 40 years, the consumer society has spread out all over the western world. This consumption explosion is now reaching the developing countries as well, as the growing middle class steadily approaching the same standard of living.

To preserve its lifestyle, developed countries need huge inputs of energy resources and other resources as well, such as raw materials for the production

of luxury goods. The growth of energy demand in response to industrialization, urbanization, and social affluence has led to an extremely uneven global distribution of primary energy consumption. About a quarter of the world's population consumes three quarters of the world's primary energy.

The developed countries currently consume 70 per cent of the world's energy supply, 75 per cent of its metals, 85 per cent of its wood and 60 per cent of its food while accounting for only 20 per cent of its population. Per capita energy consumption in the developed countries is nearly 15 times that in poor and middle-income countries. Of nearly 8 billion metric tons of oil equivalent consumed globally each year of which the U.S. accounts for 1.8 billion; the former Soviet Union 1.4, Western Europe 1.3, China 0.7, Japan 0.4, and Africa 0.2 billion.

During the Rio Conference, any discussion of the population issue triggered off a huge North-South row about the subject of over population and over consumption. When the North pointed out a huge population growth in developing countries places heavy strains on the natural environment, the South countered by stressing that one individual in the developed world consumes 15 times as many resources as one in the developing world. Even if high population growth rates in the developing world were reduced, the fast pace of resource depletion, as a result of high consumption levels in developed countries, would still be more than offset to any reduction in environmental pressures, as a result of lower population growth in developing nations. The apparent unwillingness of the developed countries to change its consumption patterns is set to become a major issue in the coming years. The unplanned process of industrialization, the use of technology and the increasing number of automobiles has also been the primary cause of environmental pressure in terms of large scale emission of carbon-dioxide. It has been a major source of air pollution.

Worldwide there has been a huge increase in the level of pollution due to population increase (human excreta), unpurified industrial waste, and the excessive use of fertilizers and pesticides.

The significance of water pollution is reflected in the developing world as the incidence of infectious diseases. Water borne pathogens account for 80 per cent of all disease in developing countries, and 90 per cent of the 13 million child death each year. This has a direct and horrendous effect on the attainment of a desired family size, and its indirect effect is to induce couples to have even larger numbers of children so as to compensate for the premature deaths of their children.

Also air pollution has emerged as a problem of great regional and international importance in recent years, particularly since the 1970s, resulting in increasing health problems, damage to the strengthening of the greenhouse effect, the depletion of the ozone layer in the stratosphere and forest destruction.

The levels of air pollution in many cities represent a major medical problem. Largely as a consequence of human activities – industrial waste production, combustion of fossil fuels, deforestation – the increasing concentrations of polluting gases in the atmosphere is expected to cause a significant increase in the earth's temperature over the next few decades. The increase in temperature thus stimulates the natural greenhouse effect in an unnatural manner. The depletion of the ozone layer – acting as a filter for ultraviolet radiation emitted by the sun – leads to increased incidence of skin cancer and eye damage and to harmful effects on important agricultural crops. Some of the air pollutants are expected to become an extremely serious problem in developing countries in the near future. Together with the increasing level of industrialization, acid rain will increase the damage caused by deforestation. Table below is showing the per capita carbon-dioxide emission for selected countries which is a major source of air pollution:

TABLE –1.8 : CARBON-DIOXIDE EMISSIONS PER CAPITA FOR SELECTED COUNTRIES, 1992

| DEVELOPING COUNTRIES | CARBON-DIOXIDE EMISSIONS (in metric tons) |
|----------------------|----------------------------------------------|
| U.S A. | 19.1 |
| GERMANY | 10.9 |
| JAPAN | 8.8 |
| SOUTH AFRICA | 7.5 |
| CHINA | 2.3 |
| INDONASIA | 1.0 |
| INDIA | 0.9 |
| BANGLADESH | 0.2 |

Source World Bank 1997, World Development Report 1997

A shift of rural populations to urban areas as well as continued high levels of migration is an important part of the economic transformations occurring around the world. They also present serious new challenges. By the year 2030, nearly 60 per cent of the global population is expected to live in urban areas, compared to 45 per cent in 1994 (UNFPA, 2000). The most rapid rates of urbanization will occur in the developing countries. The urban population of the developing regions was just 26 per cent in 1975, but is projected to rise to 50 per cent by 2015. This change will place enormous strain on existing social services and infrastructure, much of which will not be able to expand at the same rate as that of urbanization.

There will be problems concerning the supply of water, power, food, waste disposal, security and pollution. In our country, big cities like Kolkata, Mumbai, Delhi or Chennai are traditionally a magnet for attracting people from rural areas. Children are also forced by parental pressure to search for job in cities. Of the 69 million children (aged below 14) counted as living in cities in 1991, 17-20 million lived in slum conditions and in 23 major cities. About 5-6 million were living in absolute poverty. A great majority of these children are illiterate. They work 7-12 hours a day for miserable pay. Similar conditions exist in cities of

neighbouring countries such as Pakistan, Bangladesh and Sri Lanka. This economic exploitation is often coupled with sexual exploitation, especially for girls and with a growing incidence of STDs, AIDS. Unplanned urbanization in developing countries has given birth to dual society resulting in growing inequality, segregation and financial, psychological and cultural fragility. In 1992, the Earth Summit set the target of reconciling sustainable development and human development with the future of the cities, in order to make these cities sustainable. To achieve this target, enormous amount of imagination and action will have to be deployed to break the vicious circle of power and environmental destruction. It would also require vigorous rural development to help slow migration of people to cities.

It is, therefore, not just population that determines the impact, but also other factors such as the level of consumption and technology on sustainable development. *This relationship between population and sustainable development is explained as the $I = P \times A \times T$ identity.* Such a model was provided by Harrison in 1992. This formula was earlier introduced in 1974 by Paul Ehrlich to determine the impact of population growth on environmental degradation:

$$I = P \times A \times T$$

where

I = environmental impact
 P = population
 A = affluence
 T = technology

According to the logic behind the equation, consumption and production processes are proxies for environmental degradation. The influences of ultimate causes -- the number of consumers and producers and their effective demand for goods and services -- are channelled through the proximate factors. Thus, developing countries with a fast growing population but limited economic production may still have a major impact on the environment. According to the

same logic, developed countries can damage the environment quite considerably owing to the exceptionally large multipliers of A and T.

Although the use of these sorts of physical-mathematical constructions¹ in general and this formula in particular is often criticized, the Ehrlich-equation remains a useful concept as a general approach.

In an attempt to determine the relative contribution of population growth to the increase in environmental damage, Harrison (1992), building on the Ehrlich formula, took into account changes over time in each of the $I = P \times A \times T$ components, thus arriving at more accurate measurements. Harrison's analysis shows that population growth bears a relatively small share in cases of rapid technological change. In developed countries, the level of environmental damage has even decreased in recent years in some areas and this was entirely due to technological changes. Population and consumption continued to grow, making the pressure on the environment worse than otherwise would have been (Population Reports, 2001).

Women and Sustainable Development

The interrelationships between women, population, environment, and development trends are complex and sometimes not readily apparent. One way to understand this complicated interaction is to put women in the centre of the population-environment-development triangle. The role and status of women in a society affects each point of the triangle and is, in turn, affected by each of these three factors. Women influence environment directly in the performance of their daily chores – collecting fuel, wood and fodder, herding domestic animals, tending crops and fetching water. Their ability to manage resources, on which their families and communities depend, is critical for everyday survival. Women influence population directly through their reproductive behaviour so does man. A woman's fertility is determined, to a large extent, by social and cultural factors, her educational level, and health and economic status. It can be modified considerably by her access to family planning and maternal and child

health care services. Women have a direct influence on development through their role in the household, in the economy and at various political levels.

In societies, where women are better educated, enjoy better health and have employment opportunities, their fertility rates tend to be much lower. This reduces considerably the overall negative impact of population on environment and development. In societies where there is greater equity between women and men, women tend to have more opportunities and more choices. Choice affords them greater options, and thus women are generally better able to contribute to economic development and environmental protection. All conferences held on population and related issues have recognized that sustainable development is defined by a better quality of life for all people, and women empowerment is central to this centred agenda.

Nearly half of the world's population consists of women. They are central and essential to the well being of the family, to the functioning of the community, and to the management of the environment. Unfortunately, women's centrality is often not recognized by policy makers. Women's health and education are neglected and their contribution to the community and household are often taken for granted.

ICPD 1994 stated that empowering women is an important end in itself, as well as a key to improving the quality of life of everyone. Without the full and equal participation of women, there can be no sustainable human development. The Programme of Action emphasizes the need for gender equity and equality and the support of men for the empowerment of women. It enunciates the right to universal, comprehensive reproductive health care, including family planning, and it points out that for women, a context which also includes education and access to resources is essential as the basis for empowerment.

A Holistic View of Sustainable Development and Population : Humanity and Quality

In reality sustainable development definitely takes into account the full consideration of population not merely as numbers but in its qualitative aspects

of human development as people or human beings. Both micro or macro level development should facilitate towards sustainable development. While Government Policies have an important role to play in moving towards sustainable development, what is equally of great significance is the role of institutions as well as individuals towards achieving that. For instance it is now recognized that local level institutions at the village level such as panchayats, cooperative societies, community have a crucial role in management of natural resources as well as socio-economic development at that level. Similarly, since a family is an individual's first school. It also has important role in shaping an individual's attitudes towards concentration, austerity, community well being, etc. and finally, individual's role in pursuing values of conservation austerity and efficient resource use. Improvement in health, education and the right to education, health, and information are key to sustainable development.

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CHAPTER – 2

GENDER EQUALITY AND EMPOWERMENT OF WOMEN

Understanding Gender

The term 'gender', derived from the French word genre, is used in place of 'sex', because most differences between men and women are culturally ascribed rather than biologically given. 'Sex' refers to binary division between males and females - the differences between them in terms of physical features, chromosomes, hormones and secondary sexual characteristics. But it has been realized, particularly by the social scientists, that biological differences between sexes cannot provide a universal basis for social definitions. The relation between men and women and the symbolic meaning associated with their respective categories, males and females, are socially constructed and cannot be assumed to be natural, fixed or predetermined. Which is why, the use of the term, gender is preferred.

'Gender' refers to those characteristics of males and females that are shaped by social forces. It is socially and culturally constructed, giving social meaning to biological differences. For example, when we discuss sex differences in life expectancies, we refer to biological differences in survival rates and compare between male and female survival rates. But when we talk of gender differences in life expectancies, we refer to social influence on survival, such as widely observed preference for sons and the discrimination of girls and women in food allocation, nutrition, health care and education

The differences between males and females derive partly from biology, partly from roles that men and women traditionally play in society, and partly from their beliefs and opinions. It is useful to denote biological factors by one term, 'sex' and social-cultural ones by another, 'gender'. But actually the two are generally very difficult to distinguish in real life. In many ways the notion of sex, like the concept of gender, is also socially constructed. Physical and physiological processes have no meaning outside of socially constructed

understandings of them. Human reproduction is as much a biological process as a social activity.

However, one area in which the distinction between sex and gender has been quite explicit is the prevailing inequalities between men and women, the subordination of women to men. It is an appropriate concept to understand the gender-based roles assigned by the society to males and females and the role stereotypes which influence all aspects of human life.

In most societies, women are considered less valuable than men. Their contributions in the home, the workplace and in the society are ignored or undervalued. They generally have little or no say in decision-making within or outside the home, starting with the crucial decision on the size and spacing of their families. They have less access to education than men, fewer occupational choices and lower earnings. Their weaker position is directly connected with perception of women as child bearers and child rearers.

The origin of human rights abuses against women and girls is often found in their families, where they first learn that women are second to men. This bias is often reinforced by custom, religious doctrines and traditions.

Sex ratio is one of the indicators of bias against women's position in the society. In India, the Constitution does not discriminate a person on the basis of sex, but the girl child is discriminated right from the womb till she grows old. Due to discriminatory practices at every stage, the male female ratio has declined.

TABLE – 2.1 : SEX RATIO IN INDIA

| YEAR | SEX RATIO |
|------|-----------|
| 1951 | 946 |
| 1961 | 941 |
| 1971 | 930 |
| 1981 | 934 |
| 1991 | 927 |
| 2001 | 933 |

It has been observed that man made social system has successfully inculcated in women to think themselves as inferior and men as their protector and superior to them. The differences between men and women are also seen based on class, caste, region and many other factors. Medical technology has also not legged behind in its bias against women. Before or at birth, parents who prefer boys puts girls at a risk of sex selection abortion or infanticide. A study reported that 78,000 female fetuses were destroyed between 1972-82 with the help of amniocenteses. Another study conducted by Maharashtra Government reported that at least 50,000 such tests are conducted in Bombay alone in a year. This technology of sex determination is misused even in small towns of Uttar Pradesh, Bihar, Madhya Pradesh, Rajasthan, Punjab, Gujarat and Haryana. The facilities of sex determination tests have now spread to rural areas also. There is a continuous decline in child sex ratio in the age group of 0-6. In 1961 it was 976 per thousand males. It declined to 964 in 1971, 962 in 1981 and 945 in 1991. But the sharpest decline during 1991-2001 to 927. What is more alarming about 2001 Census is the drastic decline in child sex ratio in economically better States/UTs such as Punjab, Haryana, Himachal Pradesh, Gujarat and also in Delhi and Chandigarh.

Broad Areas of Discrimination

If there is no discrimination against the female at the familial and societal levels, then at any given level females live longer than males. This is a biological gift granted to the female sex. But the value of gender related index as 0.574 with rank 103rd position indicates towards gender discrimination in India (UNDP, 2003).

1. Gender Disparities in Education

Women are the primary care givers in almost all societies. Thus their education contribute more to the health and education of the next generation.

More than two third of the world's 960 million illiterates are women. At least 60 million girls lack access to primary education (UNFPA, 1999).

In India literacy rate is 54.2 per cent among women. The dropout rates of girls at primary as well as at the upper primary levels are higher than those of boys. This difference becomes more as the level of education increases. In India only 8 per cent girls reaches up to elementary level, 2 per cent up to higher secondary and around 2 per cent up to graduation. Rural women are most neglected in education. This disparity in higher education is not only in developing world but also in the developed world where fewer women than men attended university education.

TABLE – 2.2 : RATIO OF WOMEN TO MEN ENROLLED IN HIGHER EDUCATION (1994)

| COUNTRY | RATIO OF WOMEN TO MEN (in percentage) |
|-------------|------------------------------------------|
| AUSTRIA | 80 |
| BELGIUM | 78 |
| JAPAN | 63 |
| SWITZERLAND | 53 |
| LUXEMBOURG | 52 |

Researches have shown that women with no schooling have about twice as many children as women with 10 or more years of schooling (Ashford, 2001)

The following are invariably given as the reasons for lower enrollment and retention for females in educational institutions.

- older girls are needed at home to take care of siblings
- girls start to work early in the life to add to the family income
- early marriage
- social customs and practices
- absence of facilities in the form of school building, hostels, women teachers etc

2. Low Women's Participation in Economic Activities

1

It has been found that by and large women are working most of the time they are awake, yet that is not generally seen or recorded as work. Women themselves do not get counted as workers. One can appreciate the role of women and their economic activity better if one considers what women in general do and not merely what women workers do. Most women are engaged in low skilled and low waged work.

In the developing world, women grow up to 80 per cent of all food produced, but rarely hold the title to the land they cultivate. Worldwide, they constitute one third of the wage-labour force. Much of their work, however, is unpaid, including gathering fuel and water, among a wide range of other activities. Women also dominate the informal sector of the economy - and this work is not usually reflected in economic statistics. If global calculations of the gross domestic product include household work, the amount would increase by 25 per cent

When all of women's work is taken into account, their economic contribution increases dramatically and is generally greater than that of men. It is also clear that women work much longer hours than men. In developing countries, women's work hours exceed men's by 30 per cent. According to 1991 Census, only 22 per cent women in India had visible jobs and 19 per cent of all working females are engaged in non-agricultural activities (Census of India, 1991).

Statistics and surveys do not reflect the real contribution of women to the labour force.

Women around the world, for instance,

- contribute two-thirds of the hours worked in the world but earn about one-tenth of the world's income;
- do almost all the world's domestic work;
- provide more health care than all the organized health services put together;

- grow half of the world's food, but own only 1/100 of the world's land;
- make up one third of the world's paid labour force, but are concentrated in the lowest paid occupations; and
- earn less than three fourths of the wages of men who do similar work

The amount of hours women spend on domestic chores, caring for children and in subsistence agriculture, and the monetary value of their labour, are not only grossly underestimated, but there is also little support forthcoming for the division of labour. It is also observed that due to pressure of domestic work, children particularly girls are withdrawn from schools which in a way undercut children's educational prospects and laying the foundation for continued poverty and large families.

3. Health and Nutrition Oriented Discriminatory Practices

Inequalities between men and women are closely linked to women's health including reproductive health and well-being throughout the life. In some societies, feeding priority is given to senior males and boys in the household and then women and girls consume the leftover, which results in nutritional deficiency among girls, old women and pregnant women. With regard to excess female child mortality, the reasons behind this are fairly well established, namely, lower calorie intake less likely to receive health care than male children and lesser utilization of health services for girls. Girls also start working at an earlier age than their brothers and toils harder and longer. It was also found that women of childbearing age in the developing world do not eat the recommended minimum of 2,250 calories a day (NCERT, 1991).

An average Indian woman consumes barely 1400 calories. The shortfalls are found to be more marked during lactation. Poverty and the absence of sufficient economic means contribute to shortfalls in nutrition in general, but women experience this all the more because of the gender discrimination and the perception of the man-made social system (Sen, 1999). Giving men and boys

better shares of food in terms of quantity and quality is a deeply entrenched idea among a large section of our women. This idea is equally strong in both types of household - where the total availability of food is sufficient or where it is less than what the members need. In poorer homes where the girls and women bring equal or more-income (in cash or in kind) compared to men, they take less than equal even during pregnancy and lactation. The same girl who experiences discrimination at a tender age even in respect of food is burdened with domestic work and responsibility in helping the mother, taking care of the young ones, etc. No doubt all normal and desirable urges, zest and joy about life get crippled in her at that early age itself. She grows up without receiving adequate nutrition or health care and also without knowing that something is being denied to her or that it is her right to have it. The health status of these overworked and underfed women, who get very little rest, may be attributed to various reasons. The National Perspective Plan (NPP) 1988-2000 (Government of India, 1988) Document has listed them as follows:

- (i) Major disparities in health care in population groups is in rural and urban areas, remote, backward, hilly and desert areas, and in socio-economically deprived groups;
- (ii) Social attitudes and prejudices inherent in our milieu, which are unfavourable towards girls and women;
- (iii) Poor health of women due to the synergistic effects of high levels of infection, malnutrition and uncontrolled fertility extending over a prolonged span;
- (iv) Inadequate basic health care facilities (including facilities for Maternal and Child Care, Family Planning, Medical Termination of Pregnancy, and nutrition) for women and children, in terms of outreach, range of services, quality, availability, etc.;
- (v) Inefficient use of resources available for health care of women, resulting in a slower pace of health development for them;

- (vi) Ignorance and lack of knowledge related to health, nutrition and family planning, affecting self-help efforts in health and resulting in under-utilization of existing resources; and
- (vii) Absence or inadequacy of essential non-health facilities, which affect health, such as potable water and sanitation, female education, food supply, etc.

The NPP has also noted that women face a high risk of malnutrition, retardation in growth and development, disease, disability and even death at critical stages in their lives, viz. infancy, early childhood and adolescence and the reproductive phase. In old age, they face threats of breast and uterine cancer and menopause related problems.

4. Neglected Maternal and Child Care

These are closely related to women's health and status. The Committee on the Status of Women in India (CSWI) noted that the maternal mortality rate was high enough to raise the overall female death rates and accounted for the unfavourable sex ratio. Many studies of the mid-seventies have pointed out that much of pregnancy loss and pre-natal mortality result from premature births and malnutrition. Frequent pregnancies resulting in protein malnutrition and nutritional anaemia cause a large proportion of maternal deaths. The situation has not improved during the last fifteen years. As mentioned earlier, the NPP document states that a woman in the subcontinent runs a life-time risk of 1 in 18 dying from a pregnancy-related causes. Anaemia, haemorrhage, toxemia, sepsis, and abortion are as the major causes of maternal deaths.

Poverty is strongly linked to poor health and women represent a disproportionate share of the poor. Women in poor households have the highest fertility, poorest nutrition, most limited access to skilled delivery care, which contribute to higher maternal and infant death rates.

Child care is a major responsibility and cause of concern for women. In our country it is mainly a private affair, and the class-differences in our society are reflected in this as in most other aspects of life.

But even women from well-to-do households face problems in the absence of crèches and similar facilities to suit their convenience and to their satisfaction. Women have started feeling the pinch of the disappearance of the joint family without the creation of alternate support systems. Many middle class women who are employed, try to cope with the situation by employing young women from the lower class. But this cannot be considered to be a perfect arrangement, as the young women are not trained for this task. Today's child grows up in a world, which is becoming both complex and hazardous and the child needs much more than food, toys and clothing. Unfortunately, we have not yet come to realize the meaning and content of childcare in the fast changing surroundings.

The case of those women who work in the unorganized sector, often as household producers or as land less agricultural labour is even worse. It is with the help of a wide network of elders - parents of wife or husband, old uncles, aunts, unmarried sisters, elder children, other relatives and neighbours - that most of these women manage to take care of their children.

5. Early Marriage

The legal age at marriage in India as prescribed by the Child Marriage Restraint Act 1976 is 18 years for girls. In 1996, an average of 38 per cent of girls in the age group of 15-19 years were married. This rate increases significantly in rural population where 45.6 per cent of girls in the age group of 15-19 are married. Nearly 2/3 of these violations are reported from Uttar Pradesh, Bihar, Rajasthan and Madhya Pradesh. Early marriage seriously affects the health and future of a young girl who has to go through a cycle of child bearing and child rearing at a very early age. An estimated 10 to 15 per cent of all births

take place when women are in their teens. Teenage mothers accounts for almost 25 per cent of maternal deaths (Government of India, 1998).

6. Violence Against Women

Violence against women is widespread world-wide. Between 20 and 60 per cent of women reported having been beaten by their partners. While this problem affects women of all classes, it tends to affect the poor most severely. Gender-based abuse is broad-based and, in addition to physical, sexual and psychological abuse of a woman by a male partner, it also includes sexual abuse of female children, dowry-related violence, marital rape, female genital mutilation, sexual harassment, sexual assault, trafficking in women, forced prostitution, female infanticide and selective malnourishment of female children (UNFPA, 2000).

- ❖ In the United States, wife abuse is the leading cause of injury among women of reproductive age.
- ❖ In the Russian Federation, 14,500 women were killed, and more than 56,000 injured, by their husbands in 1993.
- ❖ In the Kissi District of Kenya, 42 per cent of women reported having been beaten regularly by their husbands (UNFPA, 1995).
- ❖ In India, police recorded 5157 "dowry deaths" in 1991.

The National Crime Record Bureau (1992) points to the grim situation of women in our country.

- One rape every 54 minutes
- One molestation every 26 minutes
- One act of cruelty every 33 minutes
- One criminal offence against women every 7 minutes

Available statistics shows that during 1987-91 reported cases of rape increased from 7,767 to 9,793 an increase of 26 per cent. Increase in

molestation is by 27 per cent and in kidnapping by 36 per cent. During the same period dowry deaths also increased. In the age group of 15 to 24 years, around 32 per cent women die due to burn. There is also an alarming increase in the incidence of female suicides.

Six States namely Madhya Pradesh (17.6%), Uttar Pradesh (15.7%), Maharashtra (13.9%), Andhra Pradesh (7.9%), Delhi, together accounts for 68.3% of the total crimes committed against women in the country in 1991.

From 40 to 80 per cent of all physical abuse suffered by women is caused by a close family member. Qualitative research on sex within marital relationships conducted by the International Center for Research on Women found that women give in to their husband's wishes for sex or certain types of sex to avoid a fight. They fear that if they don't give in, they will be accused of infertility. Women's low socio-economic status also makes them more vulnerable to physical and sexual abuse. Even women often view a certain amount of physical abuse as justified under certain conditions like not preparing food, not caring for children suspecting her faithfulness etc. (IIPS, 2000)

The abuse of women has an impact on many aspects of their lives, including their psychological well being, self-esteem, bodily integrity, public participation, autonomy, sexual pleasure and the well-being of their children.

Sexual abuse also has significant effects on women's reproductive health. Unwanted pregnancies that result from sexual assault may lead to unsafe or illegal abortions, which can cause serious ill health and even death. Sexual abuse can damage self-worth, lead to earlier onset of sexual activity and increase the likelihood of unprotected sexual activity, STDs and AIDS.

The following are some of the causes of violence against women.

- Cultural norms that socialize women into submissive roles from early childhood.
- Cultural norms of 'acceptable' male behaviour i.e. men's 'right' to dominate women, perception that men are superior to women and perception that being masculine means being dominant and tough
- The use of physical violence as a means of resolving conflict.

7. Lower Positions of Women in Political Leadership

While women comprise more than half of the electorate in almost all countries where democratic elections are held and have demonstrated leadership and a distinctive approach to decision-making, both the judicial and legislative branches of government remain dominated by men. In addition, women represent only 10 per cent of elected legislators world-wide, far from the 30 per cent target suggested by the United Nations Economic and Social Council. Even in the United Nations, 50 years after its creation, women are underrepresented at high levels.

Since then, there have been only 24 female heads of state or government, although there were more at the end of 1994 than ever before. While the proportion of women in parliamentary positions remains low In 21 countries, women constitute at least 20 per cent of parliamentarians. Yet, in 1994, the average percentage of women in the lower houses of parliaments was less than 11 per cent, and in the upper chambers less than 9 per cent. In eight countries, there were no female parliamentarians. While recently there have been a significant increase in the proportion of female parliamentarians in some countries, regional data show only modest increases overall.

In India, seats held by women in Parliament are only 9.3 per cent. (UNDP, 2003) Women's place in public life is limited. Only 23 per cent women are administrators/managers professional and women in technical field are only one fifth. The provision of 33 per cent reservation for women in local bodies such as Panchayats and Municipalities is an effort to bring them into main stream of decision making but in reality many of them are forced to abide by the decisions made by their husbands, brothers or fathers. In many cases the actual decision is made by males and not by elected females.

Gender Equality and Equity and Empowerment of Women – Essential for Population Stabilisation

Gender equality between men and women refers to an equal balance of power between males and females so that neither sex is placed in a position of dominance. Gender equality grants to all males and females equal control and treatment to administer their rights and responsibilities, opportunities and mutual respect. It also applies to the absence of discrimination in terms of opportunity, status, utilization and/or access to the distribution of goods and services.

Further, it calls for an understanding that men and women have different needs and by responding to these needs with gender awareness skill, we can create more equal relationships and enable both males and females to enjoy the benefits as well as the roles and responsibilities in society. Equality between men and women will not mean that men and women become the same but it means that their livelihood and opportunities should not be determined by their sex.

Gender equality is also central to matters relating to sexual and reproductive health. Women and men have different roles, needs and perspectives which must be recognized that include full respect for the integrity of the person, mutual respect, consent and shared responsibility for sexual behaviour and its consequences.

Gender equity refers to the set of actions, attitude and assumptions that ensure that males and females receive a fair share of the benefits as well as the responsibilities in society irrespective of gender. Gender equity grants equal treatment before the law, equal access to occupations, equal pay for work of the same value and equal participation in the community.

Empowerment refers to the process by which the powerless gain greater control over the circumstances of their lives. It means not only greater control over resources but also greater self-confidence and the ability to make decision on an equal basis (Ashford 2001).

Women's empowerment means enabling women to gain access to and control of resources as well as their own lives and fertility. It needs transformation of these structures and institutions, which reinforce "gender discrimination and socio-economic inequality in the society. Empowerment of women by enhancing their education involving them in productive activities and their rights to make decisions in all spheres of their lives especially in the area of sexuality and reproductive health is essential for achieving the goal of population stabilisation.

Since the origin of human rights abuses against women and girls is often found in their families, where they first learn that women are second to men, empowerment, therefore, should also begin with winning equality, autonomy and respect for women within the family. The power to make decisions within the family is the basis for the power of decisions in other areas.

Empowerment of women also requires that men are aware of gender inequalities and are willing to question traditional definitions of masculinity.

The following factors may contribute towards gender equality, equity and empowerment of women:

1. Empowerment Through Education

Women's right to education is a basic human right. It is perhaps the most important means for empowering women to exercise their rights in society and in the home. Education gives women a sense of their own identity and self worth. It opens the door to opportunity and choices and gives women the knowledge and skills to make choices for themselves. Education is an investment that stays with a woman throughout her life.

According to the ICPD Programme of Action, "education, together with reproductive health, is one of the most important means of empowering women with the knowledge, skills and self-confidence necessary to participate fully in the development process".

Education is a cornerstone of women's empowerment because it enables them to respond to opportunities, to challenge their traditional roles and to change their lives. Educating women benefits the whole of society. It has more significant impact on poverty and development than men's education. It is also the most influential factor in improving child health and reducing infant mortality. Women's education has an effect on family size. The more years of education a woman has, the fewer children she tends to bear.

Research findings strongly confirm that educating women delivers the highest return of any development investment and that it is a sine qua non for the achievement of sustainable development. Educated women are better able to perform their various roles - in the workforce, in the home and in the community - and to make a significant contribution to their societies.

Findings from a World Bank study of 200 developing countries indicate that countries which allocated substantial resources to female primary education experienced higher economic productivity, lower fertility rates, lower infant and maternal mortality and improved levels of life expectancy for both men and women, compared to countries with lower levels of women's educational attainment.

But for education to make a difference and have a strong impact on fertility, research studies have also shown that a woman must have at least education beyond primary schooling. Education up to the university or tertiary level is often the key to entering into the higher echelons of professional life. But compared with women with no schooling, women with primary and secondary education have been found better able to accomplish many things. Similarly education can help in reducing the incidence of AIDS.

An educated woman will

- likely to delay her marriage and postpone childbearing,
- likely to use contraception not only more frequently (on the average two and one-half times higher than those without formal education) but will choose the more efficient methods;

- likely to use health service more; are healthier themselves and less vulnerable to the risks of childbirth and their children live longer;
- likely to stand up for themselves and tend to communicate more with their husbands and have more egalitarian relationship with them including more involvement in making family decisions such as the number and timing of children they should have;
- have more chances for employment, raising their productivity and self-esteem and gains confidence which enables her to participate in community activities.

In order to improve the quality of education with a view to increasing the demand for female education, thus resulting in higher enrollment and retention rates, the following may be emphasized.

- recruiting and training more female teachers, especially from their own communities;
- establishing more community-based (less distant) schools;
- scheduling classes more flexibly with respect to hours, days, and seasons;
- providing greater privacy and safety for girls and female teachers or even, where necessary, establishing girls' schools;
- improving the quality of schooling and encouraging parents to let girls attend; and
- waiving fees or providing books, uniform and scholarships to girls.

As stated in the ICPD Programme of Action, countries must recognize the value of ensuring that girls/women begin and complete their education and of eliminating gender bias in all types of educational materials that enforce and reinforce inequalities between men and women.

Educational programmes for both boys and girls must promote shared responsibilities. From the moment they begin their education, boys need to be taught to take care of their own domestic needs and to share responsibilities in

the home. Educating both boys and girls in non-stereotyped thinking about male and female roles is critical.

Men - as legislators, decision-makers in ministries of education, school administrators, participants in the design of educational curricula, teachers and fathers-have critical roles to play. They must make sure that girls are able to go to school, stay in school, and are taught the skills they need to succeed in the workplace and the world at large on equal terms. Men also must teach boys new ways to think about their roles and about women in this rapidly changing world.

2. Access to Employment

Access to employment, enables women to supplement the family income, thereby giving access to better food, housing and other basic amenities. Opportunities for further education, training and development of skills, for instance, help women to move upwards in the employment and social ladder.

Studies have shown that employment of women appears to exercise a marked influence on family size and fertility and family well being. Employment of women contributes to reduction of family size and fertility in the following ways:

- Working women marry at a later age, especially if the employment offers a sense of financial independence, which would reduce the desire to marry for economic support.
- When the roles of mother and worker are most incompatible particularly when the place of work is away from the home and the women's employment provides her with significant social, psychological and economic rewards, making it difficult for her to forego her work in order to have another child
- If there are child-care services to attend to their children while they work.
- Studies have shown that women who work in the modern sector were found to bear less number of children that would result in lower fertility.
- Economic empowerment is linked to family well being.

Women are more likely to spend their earnings on their families basic needs and, therefore, their income tends to have more positive effects on family well being.

Bias against women in the workplace must be removed through a forward-looking economic policy. Women's roles in the economy are critical to family survival and to sustainable development.

Existing policies that place constraints on women must be changed. Women must have equal access to credit, property and markets, and should not require the consent of a male family member in order to secure this access. Policy changes must also be made, which place greater value on women's roles within the family, household and informal economy and which ensure that men take equal responsibility for their children and household tasks.

Men – as those who make and can change economic policy and legislation – must recognize that this is essential, not only for women but for society as a whole.

4. Improving Health including Reproductive Health

Good health is the plank on which a woman's ability to work, to give birth and look after children, to attend to household work and to participate in many other domestic, agricultural and community work rests. Absence of disease is only one dimension of health. Intake of nutritional food, knowledge of safe and hygienic health practices, opportunities for rest and recreation, ability to develop a dialogue with other members of the family and the community on family health matters to make the right choices at the right time and ability to make informed choices about the number, timing and spacing of children, for example, are all important aspects which contribute to the overall health status of a woman.

5. Ending Violence Against Women and Girls

Numerous strategies have been developed to combat this problem. These include reforms in justice system and services for women who are victim

of violence. Most of these initiatives have been led by women themselves. The long-term success of these strategies will hinge on men's involvement – both in dealing with a problem that has long been swept under the carpet and in working with women to address its underlying social issues.

Most laws remain inadequate in protecting women against abuses or in imposing sanctions against abusers. Some laws even trap women in violent relationships. In Chile, for example, divorce is illegal even in cases of extreme violence.

As legislators, judges, police officers, health and family planning service providers, teachers, husbands and fathers, men have a key role to play in eliminating violence against women. They must participate in efforts to change the deeply rooted cultural causes of the problem. This includes fundamental changes in the way they view themselves as men – and the way they view women. It is essential to help men develop a self-image as nurturing people who can care for their partners. There is growing evidence that the creation of this kind of self-image may lead to a reduction in violence against women.

Until they are able to live in a world where they are free from the fear of violence, women will never be truly empowered.

6. Women's Role in Politics and Decision Making

Over the centuries women have come a long way from being treated as mere items of property to full-fledged individuals, enjoying all legal rights and privileges as men.

The Convention on the Elimination of All Forms of Discrimination (CEDAW) against Women, adopted by the General Assembly of the United Nations, in 1979, and ratified in 1994 is perhaps the single most powerful and influential statement to date on the commitment of the international community to bury all remnants of discriminatory laws and regulations, traditions and practices, and to implement measures which will help further to improve the status of women. By 1994 more than 138 countries had ratified the Convention.

As a result, legal recognition has been accorded to women in many ways like:

- ❖ By the inclusion of an equality provision in the Constitution and by prohibiting discrimination based on sex.
- ❖ By granting the right to vote, to contest at elections and to hold political office.
- ❖ By removing restrictions which prohibit women from entering into commercial transactions in their own capacity.
- ❖ By permitting women to own property in their own name.
- ❖ By granting women equal rights in matters relating to inheritance and succession.
- ❖ By treating women as a separate entity for taxation purposes
- ❖ By recognizing women's right to maintenance and to have custody of minor children.
- ❖ By requiring the consent of women to marriage.
- ❖ By permitting women to institute legal action in courts of law in their own name.
- ❖ By permitting women to file action for judicial separation or divorce (UNFPA, 1995)

Many of the laws – such those related to property, to divorce, to engage in commercial transaction, etc. are key to women's empowerment. The empowerment of women calls for both reform and enforcement of the law

Recognition of the legal status of women is one thing, the ability to enjoy this status and to make full use of it is a different matter altogether. In many societies, there are groups of women who are unaware of their legal rights and who do not have the financial ability to seek legal advice and institute legal action. Most laws can rarely be understood by those without a training in law, and simple explanatory texts in which legal concepts and principles have been demystified are rarely available for the benefit of the public.

The mass media should spread knowledge of laws and programmes in simple layman's language. Free legal aid should be provided to women. Laws made by different countries in the region should be widely publicized. Laws and programmes should be discussed in schools and adult education programmes. NGO's specially women's organizations should be oriented about laws made to benefit women.

At the political level, the government and the private sector must work together to influence economic policy, placing greater value on a woman's role within the family and in the economy. In addition, legislation that seeks to protect and empower women must not be left on paper alone but must be executed with full support from all levels of government.

The ICPD Programme of Action 1994 stated that countries should act to empower women as soon as possible by establishing mechanisms for their equitable representation at all levels of the political process and in public life and enabling women to articulate their concerns and needs (UNFPA, 1995).

Men's role in improving the situation is essential. As leaders of government, legislators and judges, they can ensure that the CEDAW is not only ratified, but acted on, and that laws are enacted and enforced that are not only unbiased based on gender but that actively promote women's empowerment. They can also work to reduce male dominance of the political sector. Women's involvement in politics and the judiciary will benefit both women and society as a whole. Though the real change is slow, but education can really play an important role towards this goal.

Education can provide boys with a different interpretation of masculinity, replacing the one based on domination to one defined by shared responsibility. Education can provide girls with increased opportunities to make informed decisions for themselves.

- Offer a girl education and she has the power to make choices. Offer her a nurturing environment in which to grow and she can change her society for the better.

- Offer her reproductive health services and she and her future children will enjoy a healthier tomorrow.

Policies and programmes, therefore, must be put in place, which recognize the critical role of both parents in the family. Reinforcing the parent-child link is critical to efforts to empower women and promote gender equity.

Policies and programmes must be directed at changing the current situation in countries where young women are trained in home-making but not in income-generating skills, and where young men are ill-prepared for fatherhood because the society discourages them from caring for children.

A set of practical policies and programmes should include the following:

- A legal and ethical framework that fosters social and economic justice in marriage and in the parent-child relationship.
- Provision that support non-traditional families and encourage male involvement with children.
- Education and media that promote gender equality and equity, responsible sex behaviour.
- The best family policy teaches young people about responsible sexual relations, the meaning and responsibilities of marriage and other adult relationships, and the obligations entailed in parenthood. Societies should provide discussion of these subjects through schools, community programmes and the media.

It is especially important that girls be given the knowledge, skills and means to be financially responsible for themselves and children they may have. Boys need to be taught that fatherhood means supporting their children financially and sharing responsibility for their care.

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CHAPTER - 3

ADOLESCENCE EDUCATION

Adolescence Education is an educational innovation that has emerged in the context of the need to impart education about adolescence to the learners. Adolescence as a transition period between childhood and adulthood received recognition as a distinct phase of the life-span of human beings only by the turn of the twentieth century. For thousands of years the human life-span had been viewed as a tripartite age-continuum - Childhood, Youth and Old age. In many societies including the Indian society, with predominantly agricultural economy and rural culture, it is accepted even now that individuals enter into adulthood directly from childhood. As was being done till recently on a wider scale, children were driven to appreciate and undertake adult responsibilities quite early. Boys shared the work of male adults and girls were engaged in the household chores. The practice of early marriage which was in most cases child marriage, hastened the process of assuming adult roles by children. On the eve of or just after marriage, the child was made to believe that she or he had grown up and become an adult.

However, the situation now has changed substantially because of certain significant socio-economic developments. The expanding opportunities for education and employment outside home have contributed to raising the age of marriage. An increasing number of children are continuing education beyond the primary stage and even moving out of villages and small urban agglomerations. A large number of them are coming to the urban areas for getting education as well as employment. In most parts of the country the incidence of child marriage has been reduced to minimum. The average age at marriage is increasing sharply particularly with the increasing number of girls joining schools and continuing their education. Several factors including both print and electronic media have contributed substantially to this development. While the age at

marriage is increasing, the age of the onset of puberty is advancing because of better health and nutritional care of children. These developments have led to the increasing gap between childhood and adulthood. Now there is a considerably long period when the individual is neither considered a child nor given the status of an adult. This period is known as adolescence

Definition of Adolescence

Adolescence is a period of growth and development from the onset of puberty to maturity. However, adolescence is not associated with the precise number of years. It begins with the onset of the period of rapid physical and especially sexual development called *puberty*; and it ends when an adolescent reaches reproductive maturity.

It is generally defined with reference to a period of years. Many (teen age) Development Psychologist consider it a period between 13 and 18 years while some of these put it between 10 and 19 and others extend it up to 24

The period of adolescence is a phase of rapid physical, emotional and behavioural changes. These changes arise from the hormonal changes which result in sudden increase in the activity of certain glands. All these changes are highly correlated with sexual development, during this period significant physical changes take place in terms of development of secondary sexual characteristics. Besides, the adolescents also experience psychological changes. They assert their identity and display a tendency to be independent like an adult, rather than remaining dependent on parents like a child. They start distancing themselves from their parents and depending on the peer groups. They feel intense sex-drive and attraction towards the opposite sex. With these characteristics the stage of adolescence occupies a distinct place in the life-span of human beings (NCERT, 1999).

Problems of Adolescents

Adolescence is a critical period during which significant personality reorganization occurs. The suddenness and rapid pace with which the changes

take place in the body and mind of adolescents, generate a number of problems. Although they experience the changes occurring in them, they are mostly unable to understand these developments. So far there is no authentic source readily available to them, through which they can get scientific knowledge regarding these changes. Since they need information regarding the changes and developments in them, they fall back upon the peer group or cheap literature, which provide wrong information. Being misinformed they fall prey to myths and misconceptions which adversely affect the process of personality development in them

Adolescents confront problems because of their inability to properly manage the sudden development of their interest in the opposite sex. The tendency to distance themselves from their parents and to become deeply involved with the peer group creates apprehensions and anxiety among them. In the absence of any well-informed adult intervention to help them understand and appreciate the problems and issues, they turn towards the peer group. Generally adolescents are vulnerable to peer group pressure and a number of them are pushed into an action without giving any thought to its consequences. They are found experimenting with smoking, alcohol or drugs and also with sex for various reasons including the peer group pressure

How Do Adults Perceive Adolescence?

The problems being experienced by adolescents become still more serious when parents and other adult members of their families and the community do not appreciate the changes and developments that take place among them. Instead of providing help and guidance, the adolescents are misunderstood and considered as problems by the adults. The adult world generally considers that adolescents should adjust quite spontaneously to the changes and developments that are taking place in there according to the prevailing socio-cultural norms. But a problem which may appear unimportant to an adult may have over-whelming impact on an adolescent.

We, the adults of today, also have undergone this phase, had similar experiences and confronted similar problems. This period of transition has had identical characteristics through the ages. Some of us might not have realised the impact of such changes and developments as problematic. Or, even though we confronted such problems, we did not allow those to appear like our problems. In fact, all adolescent generations have been denied their right to get scientific knowledge about the changes and developments taking place in them. They have been experiencing physical, emotional and social changes but they have never been equipped to understand and appreciate those appropriately and adequately.

For the current generation of adolescents the problems have still more critical implications. Adolescents of today are growing up in a world that is fundamentally different from the one that existed when their parents were young. Indian society is also becoming more urban and industrialised and is in a constant state of transformation. There is tremendous impact of mass media, particularly electronic media on the lives of individuals and communities that are propelled to re-examine the cherished values and beliefs, question negative traditional norms and reconsider priorities.

Need for Adolescence Education

The current generation of adolescents is more than a billion strong, and will be the largest generation in history to make the transition from children to adults. But their health needs, and particularly their reproductive and sexual health (ARSH) needs, continue to be ignored and neglected. As they stand at the threshold of adulthood, they need authentic knowledge that helps them understand the process of growing up in particular reference to their reproductive and sexual health needs. They have to be well equipped to cope with the problems which they confront during the transitional phase. They need guidance and independence, education as well as opportunities to explore life for themselves in order to attain a level of maturity required to make responsible decisions.

It is in this context that the need for an educational intervention is strongly felt. This need is particularly felt in India, because the school curriculum here does not include the crucial elements of reproductive health such as sexual development during the period of adolescence, HIV/ AIDS and drug abuse. There are contents on the biological aspects of the reproduction system, but education in these elements cannot be complete by giving simply the biological information. There is a need to focus on physiological, emotional and socio-cultural dimensions of the adolescent reproductive and sexual health (ARSH) in a holistic manner. After serious consideration for rather too long, now a consensus has been reached in favour of the introduction of adolescence education in schools with a view to providing authentic knowledge to students regarding the process of growing up, HIV/ AIDS and drug abuse, influencing their attitude, behaviour and value orientation, and developing in them appropriate skills.

Earlier there were many who did not think it proper to introduce elements relating to sexual development in the school curriculum. They quite often put forth the following arguments:

- (i) Sex and sexuality are intimately private matters which are not to be discussed in public, and that too with young children. In India individuals have been receiving information about these matters indirectly through different sources available in their respective socio-cultural settings. Therefore, there is no need to introduce such an educational programme in Indian schools.
- (ii) If schools start providing knowledge about the sexual development, the young children will be encouraged to experiment with the newly acquired knowledge that is generally exciting. This will promote promiscuity and sexual permissiveness, spoiling the youth and also the school and social environment.
- (iii) The regular discussion of sex and sexuality that is a treasured sublime instinct of human beings will reduce it to mundane routine affair. The young students will be desensitised and will not be able to appreciate its sublime value in their future lives

All these arguments were considered during the process of consensus building for introducing adolescence education in schools and were not found plausible because of the following reasons:

- (i) A number of studies lend support to the fact that adolescents desire and seek authentic knowledge on sexual development that they experience. But sex being a taboo, no authentic source has been available to them, through which they can get such knowledge. This situation creates anxiety and confusion and generates myths and misconceptions among adolescents about various dimensions of their growing up. These myths and misconceptions are carried over to their adulthood, adversely affecting their attitude and behaviour throughout their lives.
- (ii) Since the average age at marriage is increasing and the age of puberty is advancing, the young people have a longer interval between their sexual maturity and marriage. This situation has increased the possibility of their being engaged in premarital sexual relationships. Studies conducted in different cultural settings have found the growing incidence of premarital sexual relations among adolescents. It has serious implications, especially in the context of the risk of HIV infection. It is, therefore, considered necessary for school curriculum to equip adolescents well, so that they manage their sexual development responsibly and develop a healthy attitude towards sex.
- (iii) The media reports highlight almost regularly the growing incidence of sex crimes in our society. The particular matter of great concern is the problem of sexual abuse and exploitation of young girls and even minors. These situations demand urgent educational intervention, so that young children are made aware of the implications of sexual development in them and the need to respect the inviolability of every person and to safeguard themselves against such inhuman incidents.
- (iv) The impact of traditional value system that used to influence the sex-related behaviour of individuals has been waning because of certain

new trends in social development like urbanisation with its widespread impact on human life, migration to slums in the cities and the changing lifestyles. There is a need to reinforce those social and cultural values that militate against irresponsible sexual behaviour.

- (v) Even when adolescence education is not being imparted, children and adolescents are exposed to sex-related issues, and that too at times mostly in a crude manner, through other sources like cinema, film magazines and other periodicals, video parlours, commercial advertisements and certain sensuous programmes telecast on domestic and foreign channels of television. Even newspapers are devoting increasing space to sex-related stories. Should such exposures be banned? We know that it cannot happen. It will, therefore, be better to impart adolescence education to adolescents, so that they may appreciate and manage such exposures in proper perspective.
- (vi) The AIDS pandemic has added urgency to introduce adolescence education in schools. Although HIV, the virus that leads to AIDS, can be transmitted through blood and from the infected mother to her child, the principal mode of transmission is through sexual relations. The sharing of syringes and needles by drug addicts is also a potential way of HIV transmission. The data on HIV transmission clearly indicate that adolescents constitute the largest group among the victims of HIV infection. Since there is no vaccine or cure available for HIV/AIDS, preventive education is the only means to promote behavioural changes which can prevent the spread of HIV infection.
- (vii) The increasing incidence of smoking and use of tobacco, alcohol and other dangerous drugs by young children is assuming alarming proportions in several parts of India. Young adolescents tend to see the use of these drugs as part of being grown up. It is, therefore, urgently needed to educate them in drug abuse and motivate them against drug addiction.

- (viii) The apprehensions of adults in respect of the introduction of adolescence education in schools have been proved to be misplaced. Studies indicate that education about reproductive and sexual health does not encourage students to experiment with their newly acquired knowledge. Rather, it encourages them to have positive attitude towards sex and inculcates in them responsible behaviour.
- (ix) The apprehension of teachers that the teaching of the elements of adolescence education will tarnish their "image" and promote indiscipline among students has also been negated by experiences. Wherever, teachers are responsive to the needs of adolescent students and provide guidance to them to cope with their problems, the teacher-pupil relation has become better and the school environment has improved.
- (x) There has been a significant change in the perception of adult members of the society, particularly parents and teachers, towards the introduction of adolescence education in schools. Although students always felt the need to get education in sex related matters, parents and teachers had serious apprehensions till very recently. But now a number of needs assessment studies conducted in different States have found that parents and teachers overwhelmingly favour the introduction of adolescence education in schools.

What is Adolescence Education?

Adolescence education has been conceptualised as an educational response to the special needs of adolescents in respect of their reproductive and sexual health (ARSH). Since the present school curriculum already incorporates a number of elements relating to adolescent world, the general framework of adolescence education focuses only on those aspects of adolescent reproductive and sexual health, which are not incorporated in the existing school

curriculum. The general framework has identified contents related to the following three major components:

Process of Growing up : This component covers contents on the process of growth and development of children into adulthood such as physical growth and development including development of secondary sexual characteristics, socio-cultural development including relationships of adolescents with parents, peer group and the opposite sex and gender roles, Major sexually transmitted diseases are also included in this component.

HIV/AIDS : This component includes contents on causes and consequences of HIV/AIDS, preventive measures, individual and social responsibilities towards HIV/AIDS patients and the prevention of the spread of HIV

Drug Abuse . Under this component are covered the situations in which adolescents fall prey to drugs, consequences of drug abuse, preventive measures, treatment, rehabilitation of drug addicts and individual and social responsibilities

Objectives of Adolescence Education

Adolescence Education aims at realising the following objectives:

- (i) To provide knowledge to students about adolescent reproductive and sexual health (ARSH) including HIV/AIDS and drug abuse;
- (ii) To inculcate among them healthy attitude towards ARSH issues, promoting respect for the opposite sex and responsible sexual behaviour; and
- (iii) To develop in them necessary skills to cope with and manage ARSH issues and problems.

Strategies for Institutionalisation

The following strategies are being employed to ensure that elements of adolescence education are effectively integrated into the content and process of school education.

- (i) **Awareness Building:** The first and foremost need is to create a favourable environment for acceptance of the urgent need to impart adolescence education in schools. This requires organization of awareness building activities for having interaction with policy framers, opinion leaders, media persons, curriculum developers, teacher educators, teachers and parents.
- (ii) **Integration in the School Curriculum.** Adolescence education can be imparted effectively only when its elements are integrated in the school curriculum. All the contents that can attain the objectives of adolescence education belong to various disciplines. The school syllabi of different subjects will have to be reviewed to identify the scope of integration of elements of adolescence education in each subject and these elements will have to be incorporated when those syllabi are revised. This exercise will ensure the integration of these elements in concerned textbooks.
- (iii) **Co-Curricular Activities:** However, the integration of elements of adolescence education in syllabi and textbooks may have to wait till they are revised in due course of time. But in view of its urgency, the imparting of adolescence education should not be postponed until its elements are integrated in syllabi and textbooks. The teaching learning process may be initiated forthwith by adopting the co-curricular approach. Co-curricular activities, especially designed for adolescence education, may be organized in schools as early as possible. Students' activities like Question-Box Activity, Group Discussion, Value Clarification, Role Play, Case Study, Painting/Poster Competition, Essay Competition and Quiz Contest may prove very effective in not

only providing accurate and adequate information to students but also inculcating in them positive attitude and responsible behaviour.

Skill Development in Adolescence Education

Skill development is a lifelong process. It is a process that helps individuals grow and mature, learn to have confidence in one's own decisions and discover sources of strength within and outside oneself. Generally skills are viewed as the basic courtesies of living and working with other human beings. Some of the skills develop naturally, almost automatically and some through environment, whereas some skills are developed through learning and practice. Education, and particularly school education plays a vital role in skill building among individuals, as it exposes them to varied experiences during their formative years and has the potential of providing them with ample opportunities to learn and practice.

Skills : Meaning

The term skill has been defined in various ways. Ordinarily, skill is used only in terms of a mechanical skill, technical expertness or technical knowledge of the means and methods of accomplishing a task. However, the concept of 'skill' has been used in education with a much broader meaning since long. Almost all curriculum designs make an attempt to delineate skill-related objectives along with knowledge-related, understanding-related and attitude-related objectives. In fact, skill has been an overworked term in education. It has been indiscriminately applied and variously referred to as mechanical skills, intellectual skills, emotional skills, perceptual skills, creative skills, personal skills, people skills, language skills, scientific skills, mathematical skills, laboratory skills and so on.

Without going into the intricacies of a variety of meanings given in the dictionaries and other sources, skills may be defined as abilities acquired by individuals in his/her education and working life. Some skills, like *holding a pen*,

are very simple but some like *skills of a cricket player* are very complex. Some skills (e.g., *walking*) appear to develop naturally and some (e.g., *talking*) do not develop automatically but through environment. Skills such as *dribbling a ball* by a soccer player are developed through practice, whereas other skills, like *critical thinking* and *creative expression* are essentially the product of understanding and learning.

ARSH Skills

“Adolescent Reproductive and Sexual Health (ARSH) Skills are abilities and competencies that help promote physical, mental and social well-being in respect of reproductive and sexual health among adolescents and youth, empowering them to take positive actions, to protect themselves from risky situations and to promote healthy social relationships.” (NCERT, 2003).

Why Education in ARSH Skills

All educational efforts particularly those in school education *inter alia* focus on skill related objectives. The content and process of school education are expected to influence this process and develop skills related to all the subject areas and other concerns that are incorporated in the school curriculum. However, it is commonly felt that the curriculum transaction process being adopted in school education has not been able to lay the desired emphasis on skill building. The existing teaching-learning methods focus mainly on transmission of information and imparting of knowledge to learners. In recent years some efforts have been made sporadically to about the needed change in the teaching methods and make them activity-oriented and “joyful”. But specific pedagogical methods to actualise skill building among the learners still remain a lively subject of intellectual discussion and are yet to assume their rightful place.

in the teaching-learning process. There is an urgent need to ensure that education in schools lays greater emphasis on the development of skills, more so on ARSH skills, mainly because of the following reasons:

1. Education in skills is necessary because skills in relation to everyday life may form the foundation among people for promotion of mental well-being and healthy interaction and behaviour. It is expected to enable individuals to translate knowledge, attitude and values into actual abilities, i.e. "what to do and how to do".
2. It can influence the way individuals feel about themselves and others and also the way they think they are perceived by others. It may contribute to developing among them proper perceptions of self efficacy, self confidence and self esteem.
3. Generally, skill building is taken for granted. It is believed that a person who is educated is equipped with the needed skills or abilities. But in reality this does not happen. Individuals quite often lack necessary skills to deal effectively with various situations. Particularly in respect of adolescent reproductive and sexual health (ARSH) concerns, there is an urgent need to enhance the coping resources and personal and social abilities among adolescents.
4. As is evident from different kinds of emerging health and reproductive health problems, young people are not adequately equipped with skills to deal with the increased demands and stresses they experience. It is necessary to enhance their ability to take greater responsibility for their own lives by making healthy choices, gaining greater resistance to negative pressures and avoiding risky behaviours.
5. Developing ARSH skills among adolescents are needed also because the influence of traditional mechanisms, family and other cultural factors, that extended their support to individuals in managing the demands and challenges of everyday life is waning particularly because of changing

cultures and life styles. The support is no longer adequate considering the influences that young people experience.

6. The rapid social change, consequent upon modernisation, urbanisation, globalisation and the media boom, has made the lives of young people, their expectations, values and outlook very different from those of older generations. This is more so regarding reproductive and sexual health concerns, in respect of which young people are not sufficiently equipped with skills to help them deal with the increased demands and pressures. The threat of AIDS pandemic and the fast growing risk of drug abuse among adolescents and the youth demand urgent efforts for skill development among them.

Kinds of ARSH Skills

A set of life skills, described as generic life skills for psychological competence, was identified by WHO as core life skills applicable across a wide range of contexts in daily life and risk situations. Based on the definition of life skills by WHO, a reference of core life skills has been made as “the five foundation life skills areas” (Path Finder International, 2001). These are:

- | | | |
|------------------------|-----|----------------------|
| ❖ Decision making | --- | problem solving |
| ❖ Creative thinking | --- | critical thinking |
| ❖ Communication | --- | interpersonal skills |
| ❖ Self-awareness | --- | empathy |
| ❖ Coping with emotions | --- | coping with stress |

However in the specific context of adolescent reproductive and sexual health (ARSH), the above set of skills needs reconsideration. Any educational effort aimed at skill building among adolescents in the school education setting, requires identification and operationalisation of skills for two distinct target groups: teachers and students. Since the conventional teaching methods may not be effective for skill development among students, teachers need to develop

certain specific skills to be able to contribute to the process of skill building among students. Adolescent students need to develop needed skills so that they can manage adolescent reproductive and sexual health issues and problems and maintain the state of physical, mental and social well-being.

Skills for Teachers

Skill development among students has been an important objective of the school curriculum since long, but very little has been done to realize this objective. That the teacher themselves need to develop skills to realise the objective of skill building among students is yet to receive adequate attention of the teacher preparation process. This is more so for a curricular area like adolescence education that is focused on adolescent reproductive and sexual health concerns, a substantial number of which are culturally very sensitive. In order to ensure effective curriculum transaction for skill building in the area of adolescent reproductive and sexual health, the teacher has to be equipped with the following three core skills:

- (i) Communication Skills
- (ii) Non-judgemental Skills
- (iii) Empathic Skills

Communication Skills

Communication is used in a number of ways - to inform, educate, persuade, motivate, help, reinforce or advocate. It is an ability as well as a process to express and convey information, ideas and experiences, both verbally and non-verbally. There are many channels of communication that aim at achieving these objectives and every channel employs a specific set of skills to make communication effective. Teachers need interpersonal communication skills to help adolescent students develop skills related to adolescence reproductive and sexual health. Interpersonal communication is a "person-to-person, two way,

verbal and nonverbal communication between two or more people". As such, it can be one-to-one or group communication. It may be very effective in communicating technical or non-technical information and also the emotional or executive component, so important in interpersonal interaction.

The communication skills related to ARSH for teachers have certain crucial sub-skills, such as rapport building, listening, attending, speaking, questioning. These skills are commonly used by every individual, but quite often not in an effective way. For example, listening is what people do all the time, but that is what they do not do. Although their ears are open to what a person is speaking, they are thinking about what they will say when it is their turn to speak; or they are remembering something they have to do after attending that meet; or they are thinking of other issues. In fact, they are hearing but they are not paying attention to it. Particularly, when teachers are to interact with students on adolescent reproductive and sexual health issues, it is necessary to understand the following sub-skills that make communication effective.

- (a) **Rapport Building:** Teachers are expected to equip themselves with skills that facilitate the establishment of a spontaneous relationship between them and students based on respect and mutual trust. These skills help in creating a congenial environment free from apprehensions and inhibition
- (b) **Active Listening:** The teacher has to develop listening skills consciously. For active listening, it is necessary to listen to the speaker(s) what he/she says and also how he/she says it. The speaker is not to be interrupted or cut in to describe teacher's own experience. The teacher is expected to avoid distracting movements and not to pay attention to outside disruptions.
- (c) **Attending:** Students need focussed attention of the teacher while interacting with them. He/she needs to win the confidence of students through attentive listening. The teacher is expected to make students feel

comfortable and respond to them with interest. Students are not to be criticised or put down. The teacher has to encourage students to speak.

(d) **Speaking:** While speaking the teacher has to maintain his/her voice at an appropriate pitch, neither loud nor too soft. The teacher should not dominate the conversation and express what he/she feels, not only what he/she thinks.

(e) **Questioning.** When students are speaking the teacher has to ask questions. But questions should be asked to show interest in what speaker is saying, to encourage the speaker and not to find out his/her ignorance or to embarrass him/her.

Non-judgemental

While teaching any value-laden area, it is essential for the teacher to be non-judgemental. He/she is not expected to impose his/her own values and beliefs. This is more so in respect of adolescence education concerns. It is possible only when the teachers develop the needed skills to observe the following:

Dos:

- ❖ First of all the teacher has to be convinced about the need for skill building in respect of adolescent reproductive and sexual health among students.
- ❖ He/she has to avoid conveying personal values, especially while discussing value-laden issues.
- ❖ He/she has to respect the diversity of background of the learners, their values and beliefs.

Don'ts

- ❖ The teacher need not be prescriptive, as experiences prove abundantly that preaching is counter-productive.

- ❖ He/she is not to make value judgement either of students or their views, as education is more effective when varied views are expressed and discussed.
- ❖ In any situation the teacher is not expected to treat students as problems, but as individuals who need compassion and care.
- ❖ He/she need not comment on things that cannot be changed.

Empathic

Being empathic may not be considered as a skill or a set of skills in itself, but skills are required to understand the situation of a particular student with whom the teacher is interacting. Empathy is the ability to feel and appreciate the situation in which another person is placed, even though one is not familiar with that situation. It enables the individual to experience fully the feelings and concerns of another person. The needed skills for empathy may help the individual to understand and accept others who may be placed in a very different situation. These skills also help in encouraging individuals to be compassionate towards others who are in need of care and attention. To help adolescents manage their problems well, teachers need these skills to see beyond stereotypes and appreciate how the world of adolescents work. It is necessary that the teacher understands how that student feels in a particular situation and what is his/her point of view.

Skills for Adolescents

The main objective of educational intervention for skill building is to develop necessary skills among students with a view to enhancing their coping resources and personal and social competencies to manage ARSH issues and problems. Adolescent students need to develop the following skills:

Thinking Skills:

All human beings think. Thinking is a process of gathering information, understanding issues and problems, examining the alternatives, making decisions, solving problems and doing many other things. But without inculcating certain specific skills, such as critical and creative thinking, self awareness, social awareness, problem solving, and decision making, thinking does not contribute effectively to adequately respond to various challenges of life. In the context of ARSH issues also, adolescents and young people have to develop the ability to gather, analyse, interpret, assess and use the information effectively. They have to determine the authenticity, accuracy and value of information and perceive the situation in totality. When they examine the alternatives, seek reasons and change views based on evidence, they may manage ARSH related issues and problems in a better way. They have to look at pros and cons of the decision they are making and refrain from making hasty, unplanned decisions.

Communication Skills:

Human beings express and share among themselves the information, their thoughts, experiences, feelings and attitudes through a language or any other tool. This is communication. The most significant quality of communication is that it connects one individual with another individual or a group of individuals. Communication is key to human relationships. But to make it effective individuals need to develop certain skills. It is much more important for communicating in respect of a subject like reproductive and sexual health which has been the least discussed area in almost all social settings. It is essential particularly for adolescents and young people to acquire skills for effective interpersonal communication and also to negotiate well with others.

- (a) ***Interpersonal:*** Adolescents need interpersonal communication skills to maintain both their independence and relationships. During the process of

growing up, adolescents experience changing relationships with their parents, peer group and the opposite sex. While interacting with their parents or the peer group or the opposite sex they quite often experience a conflict between their independence and relationships. They can sustain their independence and simultaneously maintain relationships, if they appreciate the point of view of others and understand the roles of self as well as others. In order to build and maintain positive relationships, they have to take responsibility for their actions and make informed and rational decisions. By using interpersonal communication skills, they may manage the ARSH related issues well and properly respond to the increasing demands and pressures on them

- (b) **Negotiation:** Negotiation skills are at the heart of the skills based initiatives in reproductive and sexual health for adolescents and young people. The initiatives that will make an effort to develop various kinds of skills among them will contribute to enhancing their coping resources to negotiate ARSH issues and concerns. It is true that without even realising it, negotiation is something we do all the time to solve our problems or resolve conflicts. To negotiate means to deal or bargain with another person or group to confer for mutual agreement, to manage or to cope with certain situation successfully. Adolescents require negotiation skills in respect of reproductive and sexual health to manage their concerns while interacting with parents and adults, the peer group and the opposite sex. These skills may help them in maintaining a healthy and happy life and, importantly overcoming the peer pressure. They have to develop skills for understanding the point of view of others, being firm on one's values and beliefs and being *assertive* rather than *aggressive*. They have to negotiate not only with others but also with self in order to cope with emotions and stress, withstand peer pressure and say 'no' to harmful behaviour.

Pedagogical Methods for Skill Development

There may be various kinds of methods that can be employed for skill building among the learners. It is considered essential for such methods that they should be primarily interactive and participatory, focus on acquiring knowledge, attitudes and interpersonal skills and emphasize on experiential learning. Learners are to be involved in a dynamic teaching learning process, as learning is considered to be an active acquisition, processing and structuring of experiences. In passive learning the teacher passes on knowledge mostly through a didactic teaching method and the learner is the recipient of information. But education for skill development demands that the teaching learning process is both active and experiential.

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CHAPTER – 4

THE FAMILY: SOCIO-ECONOMIC FACTORS AND QUALITY OF LIFE

Family is one of the oldest human institutions. Despite changing social environment and economic transformation, it still remains the basic unit of all societies. The process of socio-economic development and rapid demographic changes throughout the world has influenced the patterns of family formation and family life, effecting considerable change in family composition and structure. Demographic change has altered membership of families in terms of the members, types and characteristics of kin, both within and across generations, and also in the age structure. Modernization, industrialization, urbanization and migration especially from rural areas to cities, increasing participation of women in the labour force, growing availability of opportunities for wage employment, moving people away from family enterprises and enhancing interdependence of the global economy – all have been exerting great pressure on the family. Yet, every society organizes itself around the institution of the family. An individual is born in a family, grow up in it and as an adult establishes a family of his or her own.

Definition of Family

However, there are a wide variety of family forms, perhaps with much more variations now than in the past, and hence it is very difficult to define the family in a way which is universally acceptable. The term 'family' commonly means a group of individuals who are related by blood, marriage or adoption, who share a home and a common culture extend cooperation to each other and feel ties of mutual affection. Particularly in the context of our society, the smallest family is composed of a husband, a wife and their child or children. Generally, a family consists of at least two adults of the opposite sex living in a

socially approved sexual relationship. They may also have one or more of their own or adopted children. Besides these members, the family may consist of grand parents, and other members. At times there may be a single parent family.

Types of Family

There are different types of family structures. As stated above, the smallest family unit consists of a mother, a father and a child or children, or only a couple who share a home and companionship. This is known as a nuclear family. If married children and their offspring live with the parents, the family is called extended family. The household of an extended family may also include aunts, uncles and cousins. When a family consists of all such relatives along with grand parents and grand children, it is known as a joint family.

In India, generally we have two types of family structures: (i) Joint Family and (ii) Nuclear Family.

Traditionally, joint families had been predominantly present in the Indian Society. The joint family structure was very useful in the context of agricultural economy. But with the advent of urbanization, industrialization and modernization, it was perceived that this system was declining and being replaced by the nuclear family system. The compulsions of urban and industrial societies encouraged people to break away from the joint families and live in nuclear families. But perhaps because of the emerging difficulties confronted by the nuclear families the joint family system is staging a comeback in urban situations. Though the members of the nuclear family live in urban areas, their relationship with the joint family continues and they are very often emotionally attached to it. While away from the Joint family they miss the cooperation which they were receiving by members of the joint family. If both the couple of the nuclear family are working and they have a child or children they suffer emotionally. Which is why, joint family is staging a comeback.

Functions of the Family

In terms of functions, the strength and solidarity of a society are highly dependent on how the family as a basic unit performs its functions. It is the responsibility of all members of a family to fulfill family functions, although parents generally shoulder the larger share of these functions. The problems among children can be traced back to the failure of parents/families to perform their functions. To have a truly happy family the family needs of each and every member must be met. These include the provision of basic physiological needs, safety, love and belonging, esteem and self-actualization (College of Micronesia, 1995)

(A) The family serves society through the following specific functions:

i) **Reproduction**

Self-perpetuation is the basic characteristics of all living beings and the process of reproduction helps them in doing so. Human beings in particular, reproduce to self-perpetuate. In human society two adults get social approval for establishing sexual relationship through marriage. This special relationship leads to reproduction. Children are born and brought up in a family to play adult roles and continue the process of reproduction.

ii) **Physical Maintenance**

Basic needs of members have to be provided if the family is to function properly. Basic needs include food, shelter, clothing and love. When members are too young to meet such needs themselves, it is the responsibility of parents to provide them. It is important that these needs are met adequately.

iii) **Socialization and Social Control**

A child born to a family is taught right from the moment of birth, the behaviour that is acceptable to society. This is done through examples or

through teaching. The role behaviour learned from the family becomes the model for role behaviour in our society. This way, culture is passed down from one generation to the other. Social control needs to be enforced from a very young age.

iv) **Social Placement for the Child**

At the time of birth the family provides us with an "ascribed" status, eg. caste, race, physical build etc. As we grow, the families help us find an "achieved" status, often one that is higher in the eyes of the society.

(B) **Family resources**

Family needs are unlimited and resources are limited. Family or individuals will use human and non-human resources to meet these unlimited needs. The family has to manage the use of their resources in order to maximize the satisfaction derived from them. It should be borne in mind that every event at different stages of family life drains the family resources. The demands on the family resources are heavy, especially when the different stages overlap. It is important, therefore, for the starting couple to decide during the first weeks and months of their marriage when to have the first baby, how many children to have and how they should be spaced. Family size affects the needs of family members as mentioned below. Every child has the right to a balanced diet, adequate clothing, sufficient shelter, proper education, and proper medical attention as well as all the basic physical requirements of a healthy and vigorous life" (UNESCO, 1992).

Family needs consist of the following

- a) Physiological needs - food, drinks, sex, clothing and housing
- b) Love and belonging - acceptance, giving and receiving love
- c) Esteem - self-respect and respect for others
- d) Self-actualization - self-fulfillment, reaching one's potential

Roles and Responsibilities of Family Members

Each individual member of the family is expected to behave and perform certain functions. These roles and responsibilities to be performed by different members are influenced by social norms. These roles and responsibilities are learnt in the family, the school and the socio – cultural environment. Family plays a significant role in shaping individual behaviour in consonance with the social norms. If there is a conflict between the expected and the performed roles of members of the family, the disharmony prevails. Every member enjoys certain rights and privileges and has also certain duties. While every child has a right to parental love, affection and care, he/she has also to perform certain duties and responsibilities (UNFPA, 1996).

Both male and female members of a family are equally important. Traditionally certain roles have been assigned to females and certain others to males only. It is observed that household activities are conducted only by female members of the family. The mother is supposed to perform all roles of bearing and rearing up of the child. But these roles are not fixed. Both males and females can interchange their roles according to their needs. The healthy growth and development of children can be ensured only when both the parents share the responsibilities of looking after them. The father is expected to share the parental responsibilities of child care. When male members join female members in performing household responsibilities including child rearing, it leads to the improvement to the quality of life in the family (UNESCO, 1985).

The decline in fertility levels, reinforced by continued decline in mortality levels, is producing fundamental changes in the age structure of the population of most societies, most notably record increase in the proportion and number of elderly persons, including a growing number of very elderly persons. In the more developed regions, approximately one person in every six is at least 60 years old, and this proportion will be close to one person in every four by the year 2025. The situation of developing countries that have experienced very rapid declines in their levels of fertility deserves particular attention. In most societies, women, because they live longer than men, constitute the majority of the elderly

population and in many countries elderly poor women are especially vulnerable. The steady increase of older age groups in national population, both in absolute numbers and in relation to the working age population, has significant implications for a majority of countries. Particularly with regards to the future viability of existing formal and informal modalities for assistance to elderly people, the economic and social impact of this "ageing of population " is both an opportunity and a challenge to all societies

Elderly members need special care and emotional security. All the family members are responsible to take care of them and respect them. They are also valuable and important component of the family. If there are some handicapped members in the family, they also need extra support and care from other members of the family

The following, therefore, are some implications of responsible parenthood

1. If parents want to have a family free from the probability of hunger and insecurity, they should respond by planning the number of children they are capable of supporting and rearing to full maturity within their reasonable capacity
2. If parents want eventually to be freed of their doubts of parenthood in their old age, they must respond to the growing needs of their children, and also develop the ability to respond independently to their own situation and to prepare them for adulthood.
3. If parents want to be free of a chaotic society, they must respond by striving to bring up a family whose members know not only their rights to appreciate the benefits of society but also their responsibility of supporting it
4. A husband and wife who respond properly to each other's personal needs, in spite of the functions they have to perform in raising a family are in fact, freeing themselves of the probability of estrangement throughout their material life

Therefore, if parents are able to perform their role, naturally they are able to become responsible parents who can do their responsibilities to themselves, their spouse, children and their community without much difficulty.

Marriage and Family

Generally, a family comes into existence when a man and a woman formally declare their decision to live together as husband and wife. The occasion of a formal declaration of this solemn resolve by the two, which is celebrated in the society, is known as marriage. It takes place through either religious and cultural process or legal process. Marriage, thus, is a union of two persons, a male and a female, a union sanctioned by religious and cultural customs and law. It is primarily a relationship of love and is based on trust between partners. The decisions that individuals take in this regard – who they marry, when they marry, how many children they will have and when, how to rear children and look after the welfare of the entire family, are very crucial for family life.

It is essential that marriage must be entered into with the free and full consent of the individual spouses. The practice of arranged marriage in the Indian society promoted the system of early marriage. Child marriages even now are very common in some parts of the country. If the spouses are not physically, mentally and socially mature, the quality of their family life will be adversely affected. The lawmakers in India passed a law and decided the legal minimum age for marriage in India as 18 years for girls and 21 years for boys.

A happy married life depends on a number of factors. Both the spouses who consent to become life partners must understand the importance of marriage and responsibilities involved in it. Their mutual relationship needs to be based on trust between the two and respect for each other. There should be continuous realization that both are equal partners and each one of them has a right to grow as an individual and not as a subordinate.

There must be spontaneous communication between the two and an inclination to share household responsibilities. Both of them are to understand that differences of opinion are bound to occur when two minds interact. And hence, there is a need to appreciate and accept each other's differences and deal with disagreements in a constructive manner.

Responsible Parenthood

Responsible parenthood means sharing the responsibilities of parents. One of the basic purposes of entering into marriage and founding the family is the procreation. Parents bear and rear children. It is a joint responsibility of both the parents to plan things before hand and make every provision for the future. Parental responsibilities relate to pregnancy, antenatal care, child birth, post-natal care, child-rearing and growth and development of the child. Both the parents have to respect each other's roles and responsibilities.

Have you noticed how do the male and the female birds build their nest together before the female bird lays eggs? Have you observed how do they hatch egg by sitting on those turn by turn and how do both of them feed their young ones? They provide an appropriate example of responsible parenthood.

Healthy mother is a corner stone of a happy family. A would-be mother should be physically fully grown up and healthy enough to shoulder the arduous responsibilities of pregnancy and rearing a baby. It is generally believed that this can be expected after a girl is 20. Physical fitness alone is not enough. Mentally, she should be mature enough to understand and respect to the needs of the baby, before and after its birth. The physical and mental conditions of a mother have a profound influence on the health and temperament of the child in her womb. Hence the would-be mother should have the emotional balance which comes only with age and maturity.

Women are also individuals and equal partners. There is another problem, a girl who gets married at an early age loses almost all her options but to be a housewife. Her life is confined only to being a wife and a mother. These

roles are certainly very important, but in addition, women can do much more. They can pursue habits of their choice and cultivate skills that give them occasions to express themselves provided they receive adequate education. Such education and knowledge help women to develop confidence in themselves. They are able to share their domestic and family responsibilities in a more effective manner. They can discharge their roles as wife and mothers more creditably. Their knowledge about personal and social hygiene, sanitation, nutrition and common diseases help them to take care of themselves and their infants and toddlers. To this extent, they can lay the basic foundations of happiness one expects to derive from family life.

Women with their enhanced economic worth and independence grow in social status as well. This opens up new vistas for them to contribute in social, economic, political, cultural and other spheres of life. They thus become equal partners in social, economic, cultural and other development at every level – individual, family, community, society or country and the world at large. Even if it is so, perhaps the most significant thing in this regard is the acceptance of a woman as a person and an entity in herself and not a mere appendix to her husband or a family.

It is, indeed, very good that wives are expected to take up a new role of working outside the home. Thereby, they can contribute materially to the well-being of the family and society in various ways. This, they can do, by and large, in addition to their traditional role of bearing and rearing children. Male members in the family can and must help women in various ways both in and outside home.

Husbands must realize that working wives are expected to do domestic work in the home before they leave for their places of work. They are again expected to look after husbands and children at home the moment they step into the house. In this changed scenario, it is better if husbands share various things which traditionally wives were expected to do in the past. For instance, this may include, among other things, preparing children to go to school on time. Fathers can lend a hand in helping their children do their homework for example.

Parents can help children to become responsible person by

a) Developing respect for others, especially persons of the other sex

If children can learn this, can understand what it means, and can develop this as a strongly held value, then they will be more likely to refrain from behaviour which is potentially harmful to others. It is particularly important that boys learn to respect the rights and feeling of girls and women. To a greater extent, the concept of respect for others is taught in the family. However, respect for girls and women need emphasized. The point needs to be made clearly, by exploring harmful stereotyped and their effects, and others activities. This may well be the most important for all gender issues. But it is not simply teaching about gender issues that is important. The key is developing healthy attitudes and values.

b) Developing self-esteem for both boys and girls in the family

This is particularly important for girls and should be accompanied by exposure to the variety of life options (employment opportunities, etc), which will be opening to them if they finish their education, avoid early pregnancy, and so forth.

Low-esteem among women can limit the contribution that these individual make to society. Girls whose self-esteem is low often see childbearing as the only way they can produce something of value, thereby increasing their own worth. This perception may be supported by friends and relatives. Childbearing may also be perceived as a way of obtaining much-needed affection, either from the baby or its father, but early childbearing limits a girl's life options.

Self-esteem is a fundamental sense of self-worth, not merely feeling good about oneself. In terms of its importance for adolescents, self-esteem may be best reflected in what they can envision for themselves in the future. When self-esteem includes a positive vision of oneself in the future, high motivation is possible and good long-term results are likely. Family

therefore helps children develop a positive, future-orientated self-image. Parents can also help children to achieve competence, perseverance and optimism. Children need to expand their visions of what they can become. When this happens, a lasting sense of self-worth will follow (Sikes, 1993).

Socio-cultural values & Family size

Values are developed over time and handed down from one generation to another. They are learned from the social environment – from parents, relatives, neighbours, friends, the school, the religious institutions and the community. However, values should not be accepted just because they were found useful in other time or place. Values may have to be changed or modified if they are to serve the useful purpose of guiding behaviour for the better because behaviour, particularly, fertility behaviour should respond to the needs and conditions of families and societies. Family and social needs and conditions seldom, if ever, remain the same over a period of time. Correspondingly, values and behaviour should be adapted to changed needs and conditions. It is in this light that values related to family size should be closely looked and examined to determine if they are consistent with the demands of new needs and conditions. If these values, found contributing to individual, family and societal welfare, should be accepted and maintained and if, found adversely affecting the quality of life of families and communities, they should be rejected.

Often times, values conflict arises when there are different models of values to choose from, like, for instance, when one value is taught in the school, and another at home. Conflict also crops up when one is faced with a decision to select from two good values. One way by which to resolve such conflict is to examine and weigh alternative choices by bringing out their advantages and disadvantages, their desirable and undesirable aspects and their consequences to one's self, one's family and one's community or nation. This exploration can provide the basic for decisions and subsequent action.

One of the reasons for the continuing momentum of rapid population growth in most developing countries are the socio-cultural beliefs and values that promote large family size. These beliefs and values are broadly grouped as economic values and cultural values (UNESCO, 1988).

Economic values · A common value among the developing countries is one that deals on the economic benefits of children. People are often heard to say that "More children means more helping hands at home and in the field", "Children are the security of the parents in old age", and that "More children means more income for the family".

In the rural areas especially, children are used as helpers on the farm as early as age nine if not earlier. They help in planting, weeding and harvesting agricultural products. At home, they look after their younger brothers and sisters, take care of the elderly and help in the household chores such as cooking, cleaning, fetching water.

In small family business, such as stores, restaurants, and handicrafts making, they serve as valuable helpmates to supplement the family income.

Parents expect their children to provide them security in their old age. The more children they have, the more they are assured of economic support, physical care and attention when they are old and can no longer earn and take care of themselves. Consequently, children are never looked upon as a financial burden. For many parents, the idea that children have to be fed, clothed, sheltered, educated and provide other needs for 10 to 15 years or so before they can become producers and earners is seldom considered. Parents rarely also take into account the fact that opportunities of children to get higher education and thereby improve their earning capacity become limited as the number of children in the family increases, given the limited income of that family.

Preference for sons · A common cultural value that is typically Asian is son preference. In China, sons are preferred over daughters.

An Indian woman in order to achieve status and power must have at least a son but preferably several. Sons in India are needed to continue the family,

provide protection and perform religious rites for the father's soul in accordance with the Hindu religion. Sons also bring in dowries, and in the rural areas provide free labour for parents.

In Sri Lanka, preference for son stems from the desire to have someone carry on the family name and inherits the ancestral property.

No wonder families in the Asian region especially those in the rural areas keep on trying to have at least a son no matter how many daughters they already have. Now one can see many women occupying positions that were once solely men's, such as working in the office, engaging in business and becoming politicians. In Sri Lanka, son preference is also fast waning. Daughters have proved to be equally useful in many ways. In many instances, they have demonstrated that they are even better than sons in taking care of parents in their old age.

Marriage-related beliefs There are many beliefs related to marriage which promote large family size. A marriage is not considered successful if it does not produce children. A childless couple is looked down on and pitied. Relatives and friends also expect a young couple to have a child within the first year of marriage. Not to conform to this expectation exposes the husband to ridicule and to being branded as inept and less of a man. A man is generally considered a weak and not manly if he has only one or few children.

All of these beliefs and values tend to encourage couples to have many children in order to live up to the expectations of relatives, friends and society.

Beliefs related to the role of women The traditional role of women favours having many children. Women's place is believed to be in the home and her main role is to beget and raise children. In many Muslim countries, women who cannot bear children can be divorced by their husbands. In India, brides are greeted with the traditional wish "May you be the mother of eight sons". And in order to demonstrate her value to the extended family, an Indian wife must bear and raise a large number of children. However with the increase in literacy rate

of the female gender, in India, such values are rapidly losing significance in today's modern era. Moreover, with greater employment opportunities, women can now, enrich their homes, thereby contributing productively for society and nation as a whole

Although the influence of some of these beliefs and values is waning, these beliefs and values still appear to be playing a major role in the decisions of many families and couples regarding family size. Governments of developing countries to be successful in developing rational and responsible decision making ability in their population, there seems to be a great need to change or re-orient prevailing socio-cultural beliefs and values that influence decisions and subsequent behaviour on family size.

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CHAPTER - 5

HEALTH, NUTRITION AND EDUCATION – KEY DETERMINANTS OF POPULATION CHANGE

Introduction

One of the main achievements of the twentieth century has been the unprecedented increase in human longevity. In the past half century, expectation of life at birth in the world as a whole has increased by about 20 years, and the risk of dying in the first year of life has been reduced by nearly two thirds. The increases in life expectancy recorded in most regions of the world reflect significant gains in public health and in access to primary health-care services. Notable achievements include the vaccination of about 80 per cent of the children in the world and the widespread use of low-cost treatments, such as oral dehydration therapy, to ensure that more children survive.

TABLE – 5.1 : INDIA'S DEMOGRAPHIC ACHIEVEMENT

Half a century after formulating the National Family Welfare Programme, India has

- reduced crude birth rate (CBR) from 40.8 (1951) to 26.1 (1999, SRS),
- halved the infant mortality rate (IMR) from 146 per 1000 live births (1951) to 72 per 1000 live births (1999, SRS),
- quadrupled the couple protection rate (CPR) from 10.4 per cent (1971) to 44 per cent (1999),
- reduced crude death rate (CDR) from 25 (1951) to 8.7 (1999, SRS),
- added 25 years to life expectancy from 37 years to 62 years,
- achieved nearly universal awareness of the need for and methods of family planning, and
- reduced total fertility rate from 6.0 (1951) to 3.2 (1999, SRS)

Source: National Population Policy 2000, Government of India

Yet these achievements have not been realized universally, and preventable or treatable illnesses are still the leading killers of young children. Moreover, large segments of population continue to lack access to clean water and sanitation facilities, are forced to live in congested conditions and lack adequate nutrition. Large numbers of people remain at continued risk of infectious, parasitic and water-borne diseases, such as tuberculosis, malaria etc. In addition, the health effects of environmental degradation and exposure to hazardous substances in the work place are increasingly a cause of concern in many countries. Similarly, the growing consumption of tobacco, alcohol and drugs will precipitate a marked increase in costly chronic diseases among working age and elderly people. The impact of reductions in expenditures for health and other social services which have taken place in many countries as a result of public-sector retrenchment, misallocation of available health resources, structural adjustment and the transition to market economies has pre-empted significant changes in lifestyles, livelihoods and consumption patterns and is also a factor in increasing morbidity and mortality. Although economic reforms are essential to sustained economic growth, it is equally essential to take care of the social dimension – health, nutrition and education for sustainable development of the economy.

1. Concept of Health

According to a working definition, "Health is physical, social and mental well being with an added spiritual elements". "The most acceptable definition of health has been provided by the World Health Organization (WHO) and it defines health as 'a state of complete physical, mental and social well being and not merely an absence of disease or infirmity'". This definition underlines three major areas worth examining further i.e., physical, mental and social. It also points to an important aspect that simply freedom from disease does not constitute health (NCERT, 1991).

Physical Health

Physical health is a reflection of the optimal functions and appearance of the individual such as

- 1 sound sleep;
2. regular activity of bowels and bladder;
- 3 smooth and coordinated movements,
- 4 intact senses and active reflexes; and
- 5 proper growth and development

Mental Health

With the reiteration of the ancient concept of 'a sound mind in a sound body', it is now re-established that physical and mental health are related. Though it is rather difficult to define mental health, freedom from internal conflict, adjustment to adversities and self-control, are the signs of sound mental health. However, on account of its multi-dimensional nature, it is difficult to identify precise measures on mental health.

Social Health

Social health can be measured on the basis of crime rate, illiteracy level, divorce rate and suicide rate.

Determinants of Health

Health has been defined as a relative concept, where the spectrum – ranging from positive health to death – is so wide and fluctuating that it is difficult to ever maintain a status quo. The factors which determine the health fall into five areas:

- 1 Human biology including genetic constitution
- 2 Environment (internal as well as external)
- 3 Ways of living (including hygiene, practices and behaviour)
- 4 Socio-economic status (a sum of education, occupation and income), and

5. Comprehensive health services (their availability, accessibility and affordability which decide the utilization by the society)

Indicators of Health

To be able to determine how healthy an individual or a community is, one first has to decide how to.

1. measure health,
2. compare health
3. allocate resources,
4. apply policies and programmes; and
5. evaluate the services.

One needs a set of indicators which can measure health. Till today, health is viewed as a 'positive' concept; yet most of the indicators by which health is measured are 'negative' ones, such as ill health or poor health. Health can, therefore, be measured through a set of variables, often referred to as indicators. However, these indicators have to be (a) sensitive; (b) specific, and (c) objective. The commonly used health indicators are listed and discussed below.

i) Mortality Indicators

- a) Crude death rate,
- b) Expectation of life at birth/one year of age,
- c) Infant mortality rate,
- d) Child mortality rate;
- e) Maternal mortality,
- f) Disease specific mortality, and
- g) Proportional mortality rate.

The mortality indicators only measure final outcomes and do not reflect on the quantum of sickness load in a society.

ii) **Morbidity Indicators**

- a) Incidence rate, and
- b) Prevalence rate for different diseases or disabilities

The ***Incidence rate*** takes into its numerator only the new cases of a disease in a specified period and the denominator is the population which is at risk or is exposed. This is generally used for evaluating effectiveness of control measures and also estimating the risk of developing a disease in the community.

The ***Prevalence rate*** has as its numerator the number of existing cases (old + new) of a disease over a specific period or at a point in time and the denominator is the total population. The prevalence rate is helpful in planning and administration and for measuring the magnitude and patterns of diseases and health needs

The death rate has declined to less than half in the last three decades. However, within the country, there are wide variations in the death rate, ranging from 5.9 to 11.8 per thousand. The major brunt of mortality is borne by the northern States, namely, Bihar, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh. The examination of major causes of deaths reveals that most of the deaths are due to communicable diseases, such as respiratory illness, gastro-intestinal disorder and fever. The recent trends also show a rise in deaths due to non-communicable diseases, such as cancers, cardiovascular diseases, metabolic disorders and accidents

iii) **Nutritional service indicators**

Nutrition is the prime indicator of health, especially in the first few formative years of life. Nutritional status is assessed on the basis of a group of measures such as

- (a) Birth weight,
- (b) Weight for age,
- (c) Height for age,

- (d) Weight for height;
- (e) Mid-arm circumference; and
- (f) Skin fold thickness.

iv) **Health care delivery indicators**

- (a) Doctor : Population ratio;
- (b) Doctor : Nurse ratio;
- (c) Bed Population ratio;
- (d) Population per health institution; and
- (e) Population per traditional birth attendant.

v) **Utilization rates**

Health services, with all its vertical and horizontal expansion, should be easily available, culturally acceptable and economically affordable to enable attainment of the goal of health for all by A D 2000. The extent to which this is so, decides the utilization rates of these services by the community. The utilization rates of different services give an indicator of the need and demand, and in turn the health status. The rates are

- (a) Percentage of children under 2 years immunized against diphtheria, tetanus, pertusis, poliomyelitis, tuberculosis and measles,
- (b) Percentage of women using antenatal services,
- (c) Percentage of deliveries conducted by trained birth attendants;
- (d) Bed occupancy rates; and
- (e) Average duration of stay in hospital

vi) **Social and Mental Health Indicators**

- (a) Suicide rates
- (b) Crime rates, and
- (c) Road traffic accident rates

- vii) **Socio-Economic Indicators**
- (a) Population increase rate
 - (b) Per capita GNP
 - (c) Levels of unemployment
 - (d) Dependency ratio, and
 - (e) Adult Literacy rate.

Health Status in India

The Constitution of India, in its Part IV, on Directive Principles of State Policy, states about the right to health:

The State shall, in particular, direct its policy towards securing . that the health and strength of workers, men and women, and the tender age of children are not abused and the citizens are not forced by economic necessity to enter a vocations unsuited to their age or strength [Article 39(e)]

The State shall make provision for securing just and humane conditions of work and for maternity relief [Article 42]

The State shall regard the raising of the level of nutrition and standard of living of its people and the improvement of public health as among its primary duties and, in particular, the State shall endeavour to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health [Article 47]

For the realization of social objectives enshrined in our Constitution, the Government initiated Five Year Plans in which health was identified as an important sector. With the sustained efforts, significant improvement has been registered in the health status of the people. In a broader context of the changing scenario, the mortality rate too, has been reduced to less than half (27.4 per thousand population in 1951 to 8.7 per thousand 1999); the infant

mortality from 135 (1973) to 72 (1998) per thousand live births, and life expectancy has gone beyond 60 years from a mere 32 years.

These are no meager achievements, yet they do not provide any room for complacency. The health situation in India is still a cause for serious concern. The population growth rate though showing a declining trend, the maternal mortality and child mortality are still high. The per capita calorie consumption is yet to match the recommended allowances, thus resulting in severe malnutrition, particularly among young children and expectant women, blindness, tuberculosis and leprosy continue to have high incidence. Safe drinking water, which is necessary for controlling the water-borne diseases, which account for half of the deaths from communicable diseases, is accessible to only one-third of the rural population and only 0.5 per cent enjoys basic sanitation amenities.

India, despite significant changes and improvement in the health situation, still continues to struggle with numerous health problems. Communicable diseases continue to be a major cause of ill health. The incidence of non-communicable diseases is rising. Malnutrition is widely prevalent. On the one hand there is great scarcity of resources and on the other, there is uneven distribution of health care facilities.

The majority of health problems are the products of illiteracy, poverty, ignorance, overcrowding, poor environmental conditions and uneven distribution of health manpower and institutions. Growing population further worsen the situation.

Infant and Maternal Mortality

The most affected groups in the population are children and women of childbearing age. The infant mortality rate (IMR), though steadily declining, yet remains quite high. The infant mortality rate is considered to be a sensitive indicator of not only the health status of the population, but also of the level of human development in the context of education, economic conditions, nutrition, etc. In India in recent times, there has been acceleration in the pace of decline

in the IMR, even though it is quite high as compared to other developed countries. Even in some Asian countries it is less. In Sri Lanka IMR in 2001 is 17 whereas in Thailand, China, Indonesia it is 24, 31 and 33 respectively per thousand (UNDP HDI Report 2003). In India out of 1000 children born, about 72 die during the first year and 93 in the fourth and the fifth years (UNDP 2003). In other words, almost one-tenth of the number of children born die before they are five years old. A large number of children die of acute respiratory infections and about 1.3 million die of diseases preventable by immunization, mainly neo-natal tetanus and measles. Malnutrition is a major underlying cause of death, mortality doubling for each lower category of nutritional status.

TABLE – 5.2 : MAJOR CAUSES OF HIGH IMR IN INDIA

| <u>NEO-NATAL MORTALITY</u> (0-4 weeks) | <u>INFANT MORTALITY</u> (1-12 months) |
|---------------------------------------------------------|--------------------------------------------------------|
| Prematurity | Enteritis and other diarrhoeal diseases |
| Low birth weight | Acute respiratory infections |
| Birth trauma | Communicable diseases–whooping cough |
| Congenital anomalies | Malnutrition |
| Hemolytic diseases | Congenital anomalies |
| Diarrhoeal diseases | |
| Acute respiratory infections | |

The rate of decline in infant mortality is attributed to improvement in socio-economic conditions, control of communicable diseases, better nutrition, obstetric care, immunization against vaccine-preventable diseases, and better health awareness among people. The majority of infant deaths are attributed to factors that are manageable or preventable in nature.

Besides these direct causes, there are factors, cultural, social and economic, which contribute to high infant deaths. Those are - lower age of

mother, order of birth, less interval between two births, large family size, high fertility, unhealthy child rearing practices, low family income, non-availability of ante-natal and natal services, delivery by untrained dais and poor environmental conditions. Most of these causes could be eliminated by improving the delivery of the Comprehensive Health Care Package of MCH Services with emphasis on timely screening of high-risk groups and a strong referral back up.

The other most vulnerable group consists of women of childbearing age. India belongs to the category of countries, in which maternal mortality, ranging between 5 to 10 per thousand live births is quite high. Maternal mortality accounts for more than 1 per cent of total deaths in the country and about 25 to 40 per cent of deaths among women.

India accounts for over 20% of the world's maternal deaths. The maternal mortality ratio (defined as the number of maternal deaths per 1,00,000 live births) is incredibly high at 408 per lakh live birth which is unacceptable even to some Asian countries. In Sri Lanka, China, Thailand and Pakistan Maternal Mortality Rate is 60, 60, 44 and 200 respectively (The state of World Population 2002). Within India, the inter-state variations are also a matter of concern. In Kerala, MMR is 87 where as in Orissa it is 739. The pictures of Bihar (451), Madhya Pradesh (498), Rajasthan (607) and Uttar Pradesh (707) also need utmost attention (Government of India, 2000).

The major causes of high maternal mortality are disorders during pregnancy, i.e. hemorrhages (bleeding), toxemia and puerperal sepsis. Anemia during pregnancy has a compounding effect which is directly responsible for 20 per cent of maternal deaths and is associated indirectly with another 20 per cent of deaths among childbearing mothers. The distribution of causes of maternal mortality are given in Table – 5.3 below:

TABLE – 5.3 : CAUSES OF MATERNAL MORTALITY IN INDIA, 1976 & 1993 IN INDIA**(in percentage)**

| SPECIFIC CAUSES | 1976 | 1993 |
|------------------------|-------------|-------------|
| Abortion | 11.6 | 11.70 |
| Toxaemia | 10.4 | 12.80 |
| Anaemia | 22.1 | 20.30 |
| PPH | 17.2 | 15.80 |
| Malposition of foetus | 8.4 | 5.50 |
| Puerperal | 13.5 | 12.50 |

Source: Survey of Causes of Deaths (Rural), Registrar General of India

Indian woman is almost fifty times more likely to die of a maternal related cause than her counterpart in the developed world. The intense pressure on Indian women to have sons resulted in more pregnancies thus leading to high maternal mortality. Experts have determined that approximately 72 per cent of the total maternal deaths could have been prevented by proper ante-natal and referral facilities.

The NFHS-2 survey estimated maternal mortality at 437 per 1,00,000 live births, 448 in rural and 397 in urban areas. Maternal mortality is highest in areas where fertility is highest and in those States where children are born to very young mothers.

There are communicable and non-communicable diseases which are also major threat to the health of the people in India. Communicable diseases are like malaria, tuberculosis, diphtheria, whooping cough, measles, tetanus, cholera, diarrhea diseases, trachoma etc. The non-communicable diseases are e g cardiovascular, diabetes, cancer, blindness and visual impairment etc. All these affect the health status of the population and thereby the quality of life of the people.

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Nutrition, Health and Population Change

Nutrition is the prime indicator of health, especially in the first few formative years of life. Nutritional status is used as one of the principal indicators of positive health and is assessed on the basis of a group of measures.

It is an important environmental factor which influences health and well bring Nutritional status is determined by a number of considerations, and two of the important ones are food intake and infections. Malnutrition can predispose an individual to ill health and ill-health in turn can adversely affect nutritional status. Malnutrition, unfortunately, is widespread in India and is a serious public health concern. It causes a great deal of suffering to many segments of the population, but particularly to women and children.

All the nutrients needed by man to maintain good health have to come through food – calories, proteins, vitamins, and minerals. The quantity and quality of the habitual diet, therefore, determine whether or not sufficient amounts and proper proportions of the nutrients are taken in. The reasons for insufficient intake of food by large sections of the population are several, family income and family size seems to be the two most important one decides the amount and type of food that can be afforded.

Food Intake

In earlier years, malnutrition at the national level was considered to be predominantly a 'food' problem and it was widely held that by increasing the country's food production, the problem of malnutrition could be checked. It is becoming increasingly clear that, while increase in food availability at the national level is a pre-requisite for controlling malnutrition, this in itself is not enough; because what determines the habitual diet of a family is its purchasing power, even when the per capita availability increases. Food grain production in India increased almost three-fold, from around 50 million tons in 1951 to about 194

million tons in 1997-98, but the increase in population during the period, has to a considerable extent offset the agricultural gains. Food beliefs and food taboos also strongly influence the choice of food and restrict the use of some nutritional food. These practices are mostly followed by poor people resulting in low birth weight of babies born to undernourished mothers, higher infant and child mortality.

A lack of knowledge on the part of mothers about the actual food needs of infants and children is another reason for insufficient food intake. For example, for infants and children to receive best nutrition and for specific protection against a range of diseases, breast-feeding should be promoted and supported. Misconceptions like as long as the child is breast fed, does not need other food, lack of knowledge about the nutrient needs etc. also leads to malnutrition and health problems. Thus food intake is determined by a variety of factors including purchasing power, knowledge regarding food needs of family members, feeding practice during sickness etc. Since food intake directly influences the nutritional status, which in turn influence the health of the people which is an important component of quality of life.

Nutritionally Vulnerable Group

Malnutrition affects all segment of the population but the risk of developing malnutrition and its health consequences are more serious for the pregnant woman, the nursing woman, the growing foetus, the infant and the pre-school child.

Malnourished population is generally thought to have higher fertility rates. Contrary to this belief malnutrition has the opposite effect also. The decline in sex ratio in India between age 1 and 12 is due to the higher mortality among female, while the fall in the sex ratio during the child bearing age is due to higher maternal mortality. Malnutrition plays a considerable role in causing the high mortality rate which is closely related to fertility. There is in fact an inverse relationship between family size and nutrient intake. Over 60 per cent children

who suffer from severe protein – energy malnutrition come from large families and their birth orders are four or above (NCERT, 1991).

Education as an important Key Determinant of Population Change

Education is the key factor in socio-economic development. It is one of the most effective vehicles of awareness generation among people about various issues including health. The most crucial role that education is expected to play in this context is to provide information and develop among learners positive attitude towards population and development issues and influence their value orientation in respect of these issues so that they take informed and rational decisions for observing small family norm and having better quality of family life. In this context, school education, especially primary and secondary stage occupies a central position in attitude formation among learners towards various issues including population issues. The relationship between education and demographic change are inter-dependence. There is also close relationship among education marriage age, fertility and mortality. The increase in education of women and girls contributes to empowerment of women, to the postponement of the age of marriage which results in better survival rate of children and low maternal mortality rate. In our country women's education is more significant as it comprises 50 per cent of the population. Educated women can directly influence the mental as well as physical development of the 45 per cent of the population who as children directly come under their control.

L. Summers in an essay (1994) summarized up national case studies from different developing countries, states that infant mortality is higher if the mother is illiterate and decreases with increase in mother's education. The explanation given for these findings is not that educated mothers spend more money on their children's health, it is rather that they tend more often to practice better hygiene - safe drinking water, more cleanliness in preparing meals, awareness of the danger of diseases caused due to faecal matter, protection against malarial mosquito bites, fuller attention to vaccination etc. Five years of

girl's schooling can avoid 10 deaths per 1000 deliveries. Improvement in health can be reflected in monetary benefits for the whole of society. Using the data from India, Summers compares the cost of schooling 1000 more girls with what the health system would have to spend to obtain the same results in terms of reducing mortality and fertility. In India, educating 1000 more girls would lead to the avoidance of.

- 2 maternal deaths
- 43 deaths of children under 5
- 300 births

This performance would cost \$32000 in education as against \$ 1,10,000 in health care and family planning. Education particularly of women/girls is better paying in health than investment in health sector (UNESCO, 1996). Thus education helps in achieving better health, reducing fertility and thereby in population stabilization.

Health Scene: A Changing Scenario

After independence, there is a significant changes have occurred in the health situation of the country. India being a one of the signatories to the Alma Ata Declaration has made a political commitment for attaining the goal of 'Health for All'. The Central themes of the approach, 'health for all through primary health care' are

- 1 A universal coverage with essential health care that is relevant, effective, acceptable accessible and affordable.
- 2 Community participation in planning, providing and evaluating health care.
- 3 Coordination between health and health related sectors.
- 4 Equitable distribution ensuring availability and accessibility of health services to all sections of the community, rich or poor urban or rural, and
- 5 Appropriate technology and optional utilization of resources

India officially accepted the Health Policy in 1983 and goals for achieving the target which were reflected in a phased manner

Child Survival and Health

Child survival is closely linked to the timing, spacing and number of births and the reproductive health of mother. Early, late, numerous and closely spaced childbirths are the major factors responsible for high infant and child mortality especially where health care facilities are scarce.

Gender disparities in health care and nutrition also determine the child survival. It has been repeatedly seen that there is obvious discrimination in the matter of health care with girls during sickness. Boys are taken to hospital for good medical care more promptly than girls. Discrimination in care increases as their number in the household increases. There seems to be greater discrimination with respect to schooling, literacy, professional training etc, all of which in later life contribute to shortcomings in maternal attributes which influence child rearing including nutritional status.

Primary Health Care

According to Alma Ata Declaration (WHO & UNICEF) 1978, "Primary Health Care is essential – health care made universally accessible to individuals and acceptable to them, through their full cooperation and at a cost the community and country can afford "

Primary Health Care is an integral part of our country's health care system and is based on the principles of equality, community participation, inter-sectoral coordination and adoption of appropriate technology.

The essential components of Primary Health Care are.

- a) Education concerning prevailing health problems and the methods of preventing and controlling them,
- b) Promotion of food supply and proper nutrition,
- c) An adequate supply of safe water and basic sanitation,

- d) Maternal and child health care, including family planning,
- e) Immunization against major infectious diseases,
- f) Prevention and control of locally endemic diseases
- g) Appropriate treatment of common diseases and injuries, and
- h) Provision of essential drugs

Primary Health Care Services

Mother and Child Care

i) Antenatal care

Antenatal care is the care provided to a woman during her pregnancy in order to achieve at the end of the pregnancy a healthy mother with a healthy baby. The pregnant woman should visit and consult the antenatal clinic or a qualified doctor first during pregnancy. In the first antenatal visit, the doctor will note her history, conduct a physical examination, laboratory examination of urine, stool, blood count and haemoglobin estimation. On subsequent visit, weight gain and blood pressure are checked along with urine test and haemoglobin estimation. She should be immunized against tetanus as prescribed by the doctor.

Many pregnant women suffer from anaemia and therefore iron and folic acid supplementation may be given as per the need (as prescribed by doctor). They should also be protected against vitamins A and B deficiency. The pregnant women should take balanced and adequate diet because they need considerable extra calories and nutrients.

Of equal importance for them is personal cleanliness. They need good sleep and rest. They should take green leafy vegetables and extra fluid to avoid constipation. Light exercise such as light household work is advised, but hard manual physical labour should be avoided.

When the child is born, the umbilical cord of the child should fall in seven days. Greasy or oily substances should not be applied to this cord. The delivery should always be conducted by qualified/trained persons.

ii) Post-natal care

Post-natal care means the care of the mother and the new born after delivery. There may be post-natal complications (after delivery) such as the infections of the genital/urinary tract, bleeding from vagina due to the retention of placenta or membranes in the womb, or infection of the veins of the legs (in which case they become tender, pale and swollen). These should be recognized and prompt action should be taken. The mother should make post-natal visits to the doctor. Routine haemoglobin estimation is also done and in cases of anaemia it should be treated. She should take a balanced and adequate diet. She should maintain good personal hygiene and take graded exercises to restore her form and figure. She also needs good rest and relaxation.

iii) Infant feeding

When a baby is born, the first milk from the mother should be definitely given to the baby because this (colostrum) gives the baby the much-needed immunity against diseases. For infants, breast milk is the ideal food for the first 4 to 5 months and normally no other food is required. Breast milk contains all the nutrients required by the baby. It is safe, clean and hygienic at correct temperature for the baby. It contains anti-microbial factors, which protect the child from many diseases.

Women's health and safe motherhood

Complications related to pregnancy and child birth are among the leading causes of mortality for women of reproductive age in many parts of the developing world. At the global level, it has been estimated that about half a million women die each year of pregnancy-related causes, 99 per cent of them are in developing countries. The gap in maternal mortality between developed and developing regions is wide. In 2002, it ranged from more than 440 per 100,000 live births in the least developed countries to about 21 per 100,000 live

births in the more developed regions. Rates of 1,000 or more maternal deaths per 100,000 live births have been reported in several rural areas of Africa, giving women with many pregnancies a high lifetime risk of death during their reproductive years (UNFPA, 2002). According to WHO, the life time risk of dying from pregnancy or childbirth-related causes is 1 in 20 in less developed countries, compared to 1 in 10,000 in some developed countries. The age at which women begin or stop child-bearing, the interval between each birth, the total number of life time pregnancies and the socio-cultural and economic circumstances in which women live all influence maternal morbidity and mortality. At present, approximately 90 per cent of the countries of the world, representing 96 per cent of the world population, have policies that permit abortion under varying legal conditions to save the life of a woman. However, a significant proportion of the abortions carried out are self-induced or other unsafe, leading to a large fraction of maternal deaths or to permanent injury to the women involved. Maternal deaths have very serious consequences within the family, given the crucial role of the mother for her children's health and welfare. The death of the mother increases the risk to the survival of her young children, especially if the family is not able to provide a substitute for the maternal role. Greater attention to the reproductive health needs of female adolescents and young women could prevent the major share of maternal morbidity and mortality through prevention of unwanted pregnancies and any subsequent poorly managed abortion. Safe motherhood has been accepted in many countries as a strategy to reduce maternal morbidity and mortality.

According to ICPD Plan of Action countries should strive to effect significant reductions in maternal mortality by the year 2015; a reduction in maternal mortality by one half of the 1990 levels by the year 2000 and a further one half by 2015. The realization of these goals will have different implications for countries with different 1990 levels of maternal mortality. Countries with intermediate levels of mortality should aim to achieve by the year 2005, a maternal mortality rate below 100 per 100,000 live births and by the year 2015 a maternal mortality rate below 60 per 100,000 live births. Countries with the

highest levels of mortality should aim to achieve by 2005 a maternal mortality rate below 125 per 100,000 live births and by 2015 a maternal morbidity and mortality to levels where they no longer constitute a public health problem. Disparities in maternal mortality within countries and between geographical regions, socio-economic and ethnic groups should be narrowed

All countries, therefore, must expand the provision of maternal health services in the context of primary health care. These services, based on the concept of informed choice, should include education on safe motherhood, prenatal care, maternal nutrition programmes, adequate delivery assistance that avoids excessive recourse to caesarean sections and provides for obstetric emergencies; referral services for pregnancy, childbirth and abortion complications, post-natal care and family planning. All births should be assisted by trained persons, preferably nurses and midwives, but at least by trained birth attendants.

Priority should be accorded to improving the nutritional and health status of young women through education and training as part of maternal health and safe motherhood programmes. Adolescent females and males should be provided with information, education and counseling to help them delay early family formation, premature sexual activity and first pregnancy

In no case should abortion be promoted as a method of family planning. All Governments and non-governmental organizations should be committed to women's health, to deal with the health impact of unsafe abortion as a major public health concern and to work to reduce the recourse to abortion through expanded and improved family planning services. Prevention of unwanted pregnancies must always be given the highest priority and all attempts should be made to eliminate the need for abortion. Women who have unwanted pregnancies should have ready access to reliable information and compassionate counselling (UNFPA, 1996).

Health and Family Welfare Policies

The health services and programmes were based on the recommendations of several committees convened by the government from time to time. The first such committee, the Health Survey and Development Committee (popularly known as the Bhore Committee), was set up in 1943 and submitted its recommendations in 1946. After Independence, the Health Survey and Planning Committee (the Mudaliar Committee), set up in 1959, worked within the broad framework provided by the Bhore Committee. Subsequently, three other committees were set up to review the various aspects of health care services in India: the Multipurpose Workers Committee (the Kartar Singh Committee) in 1972, the Committee on Health Services and Medical Education (the Srivastava Committee) in 1974, and the Krishnan Committee in 1984.

Delivery of health services is mainly governed by the National Health Policy, which was approved by Parliament in 1983. Although the National Health Policy (1983) places a major emphasis on ensuring primary health care to all by the year 2000, it nevertheless identifies certain areas which need special attention. These areas are (i) nutrition for all segments of the population, (ii) the immunization programme, (iii) maternal and child health care, (iv) the prevention of food adulteration and maintenance of the quality of drugs, (v) water supply and sanitation, (vi) environmental protection, (vii) school health programmes, (viii) occupational health services, and (ix) prevention and control of locally endemic diseases. Active community participation has been considered to be one of the most important supportive activities for the successful implementation of the health programmes.

After India became a signatory to the Alma Ata Declaration of 1978, thereby committing the country to the goal of "Health for All" by 2000 A.D., the government started to concentrate on the development of the rural health infrastructure. This was done to provide health care services to the rural population, which had, by and large, been neglected. Family welfare services, including maternal and child health schemes, are offered through the existing

network of Primary Health Centres (PHCs), sub-centres, and referral centres called Community Health Centres (CHCs), and also through Village Health Guides and Traditional Birth Attendants at the village level. According to the present infrastructure plan, there is one sub-centre for every 5,000 population, one PHC for every 20,000 population. As of March 1992, there were 20,719 Primary Health Centres and 1,31,464 sub-centres, providing health and family welfare services to the rural population. In cities and towns, the health and family welfare services are provided through a network of government or municipal hospitals and dispensaries, and urban family welfare centers. Private hospitals, clinics and dispensaries also play a major role in providing these services in urban areas.

India was the first country to have an official family planning programme, which was initiated in 1952. However, even during the pre-independence period, a birth control movement was started by a number of social activists including R D Karve, Dr A. P Pillai, Lady Cowasji Jehangir, Shakuntala Paranjape and others. A review of the eight development plans adopted since 1951 indicates that family planning as a measure of population control has been given a high priority in each five year plan. However, greater emphasis was given to family planning only after the Third Five Year Plan. Only Rs. 6.5 million were allocated to family planning in the First Five Year Plan, compared with Rs 50 million in the Second Plan, and Rs.250 million in the Third Plan. Planned expenditures increased more than ten-fold during the Fourth Plan (to about Rs.2,777 million).

Since its inception, the programme has been the responsibility of the Ministry of Health. It is a centrally sponsored and financed programme implemented by the states. The programme began with the creation of a Family Planning Cell in the Planning and Development Section of the Director General of Health Services in 1952. In 1966, a full-fledged Department of Family Planning was established within the Ministry, which was re-designated as the Ministry of Health and Family Planning, and a minister of cabinet rank was placed in charge.

The national family planning programme at first adopted a clinical approach. The extension approach was introduced in 1963. This involved

educating the population to bring about changes in the knowledge, attitude and behaviour of the people with regard to family planning. The approach identified several conditions needed for accelerating the adoption of family planning by the people group acceptance of a small family norm, knowledge about different methods of family planning, and easy availability of family planning supplies and services. However, before giving a fair trial to the extension approach, the integrated approach was adopted in 1966. With this, the family planning programme formed an integral part of maternal and child health and nutrition services.

The mother and childcare approach which commenced in 1977-78, is still continuing. A Programme of Social Marketing of Oral Pills was started in 1987. In 1992, the National Child Survival and Safe Motherhood (CSSM) Programme was introduced to implement a package of services combining immunization with mother and child health care interventions.

The programme promotes responsible parenthood with a two-child family norm (regardless of the sex of the children), through the voluntary use of contraceptive methods and a variety of maternal and child health schemes. Messages on the small family norm are conveyed to the masses through motivational and educational means. Imaginative use of mass media and interpersonal communication are used to increase the awareness and remove socio-cultural barriers to family planning.

The National Population Policy (NPP) 2000 approved by the Government of India registers a basic change in the policy directions. The Document reflects all the inter-related concerns that are crucial for population stabilization. It states, "In the new millennium, nations are judged by the well being of their people - by the level of health, nutrition and education; by civil and political liberties enjoyed by their citizens, by the protection guaranteed to children and by provisions made for the vulnerable and the disadvantaged. Vast number

of the people of India can be its greatest assets if they are provided with the means to lead healthy and economically productive lives". The Policy Document reflected not only on demographic goal but on social goals also which are essential for achieving population stabilization (Government of India, 2000)

TABLE – 5.4 : NATIONAL SOCIO-DEMOGRAPHIC GOALS FOR 2010

- 1 Address the unmet needs for basic reproductive and child health services, supplies and infrastructure.
2. Make school education up to age 14 free and compulsory, and reduce dropouts at primary and secondary school levels to below 20 per cent for both boys and girls
- 3 Reduce infant mortality rate to below 30 per 1000 live births
- 4 Reduce maternal mortality ratio to below 100 per 1,00,000 live births
5. Achieve universal immunization of children against all vaccine preventable diseases
6. Promote delayed marriage for girls, not earlier than age 18 and preferably after 20 years of age.
7. Achieve 80 per cent institutional deliveries and 100 per cent deliveries by trained persons.
8. Achieve universal access to information/counseling, and services for fertility regulation and contraception with a wide basket of choices
- 9 Achieve 100 per cent registration of births, deaths, marriage and pregnancy.
10. Contain the spread of Acquired Immunodeficiency Syndrome (AIDS), and promote greater integration between the management of reproductive tract infections (RTI) and sexually transmitted infections (STI) and the National AIDS Control Organisation (NACO)
- 11 Prevent and control communicable diseases
12. Integrate Indian Systems of Medicine (ISM)
13. Promote vigorously the small family norm to achieve replacement levels of TFR.
- 14 Bring about convergence in implementation of related social sector programmes so that family welfare becomes a people centered programme

Source National Population Policy 2000 Government of India, New Delhi

Some of the goals set by NPP 2000 have also been reiterated by the recently crafted **National Health Policy (NHP) 2002**, pending for approval before the Parliament. The following are the quantitative goals specified in draft NHP 2002

TABLE – 5.5 : HEALTH GOALS TO BE ACHIEVED BY 2000-2015

| GOALS | YEAR |
|---------------------------------------------------------------------------------------------------|-------------|
| Eradicate Polio and Yaws | 2005 |
| Eliminate Leprosy | 2005 |
| Eliminate Kala Azar | 2010 |
| Eliminate Lymphatic Filariasis | 2015 |
| Achieve zero level growth of HIV/AIDS | 2007 |
| Reduce mortality by 50% on account of T.B , Malaria and other vector and water borne diseases | 2010 |
| Reduce prevalence of blindness to 0.5% | 2010 |
| Reduce IMR to 30/1000 and MMR to 100/lakh | 2010 |
| Increase utilization of public health facilities from Current level of <20 to >75% | 2010 |
| Establish an integrated system of Surveillance, National Health Accounts and Health Statistics | 2005 |
| Increase health expenditure by Government as a % of GDP from the existing 0.9% to 2.0% | 2010 |
| Increase share of central grants to constitute at least 25% of total health spending | 2010 |
| Increase state sector health spending from 5.5% to 7% of the budget | 2005 |
| Further increase to 8% | 2010 |

Health Programmes in India

Though health is a state subject, even before a national policy for health was adopted various health programmes are undertaken at the national level.

These are:

1. National Malaria Eradication Programme
2. National Filaria Control Programme
3. National Tuberculosis Control Programme
4. National Leprosy Control Programme
5. Diarrhoeal Disease Control Programme
6. National Guinea Worm Eradication Programme
7. National Programme for Prevention of Blindness
8. Universal Immunization Programme
9. Vitamin A Prophylaxis Programme.

Besides these national health programmes, national nutritional and other related programmes are also in operation. These are:

1. National Family Welfare Programme
2. National Water Supply and Sanitation Programme
3. Integrated Child Development Services
4. National Goiter Control Programme
5. National Programme for Control of STDs and AIDS
6. Programme for Prophylaxis against Anemia
7. Minimum Needs Programme
8. Mid-Day Meal Programme

Educational Response to Population Concerns

Continuous efforts have been made to universalise elementary education (UEE) and attaining the goal of total literacy. A large number of interventions have been made particularly since the adoption of **National Policy on Education 1986**. Varied schemes like *Operation Blackboard*, *Teacher Education*, *Non-Formal Education*, *Mahila Shamakhya*, *National Programme for Nutritional Support for Primary Education*, *State Specific Project in Bihar*,

Rajasthan, Uttar Pradesh, Andhra Pradesh and DPEP in 248 districts of eighteen States are being undertaken. However, the goal of UEE has not been achieved though there has been an improvement in the participation of girls, children belonging to Scheduled Castes and Scheduled Tribes, religious and linguistic minorities and other Backward Castes in the school system. The latest *National Family Health Survey 1998-99* (IIPS, 2000) indicates that 79 per cent children in the 6-14 age group are attending schools.

The Evaluation Study on the total literacy campaign indicates that social mobilisation did contribute to the attainment of the present status of literacy in the country. For the first time, since independence the absolute number of illiterates has shown a decline. But the overall literacy situation particularly in demographically critical States still continues to be a matter of grave concern.

A major initiative has been taken under **Sarva Shiksha Abhiyan (SSA)** through a time-bound integrated approach, in partnership with States. It promises to provide useful and quality elementary education to all children in the 6-14 age group by 2010.

As regards empowerment of women, appropriate educational interventions have been made to raise the level of their literacy, provide them opportunities for school education, higher education and technical education and to enable them to become equal partners in economic and social development. A number of programmes have been implemented to promote education of girls. *Various Centrally Sponsored Schemes* are being implemented for the benefit of girl students. The Mahila Samakhya Programme is a major step, which recognises the centrality of education in empowering women to achieve equality. It is operating in 53 districts covering more than 8000 villages in the States of Uttar Pradesh, Karnataka, Gujarat, Andhra Pradesh, Kerala, Bihar, Madhya Pradesh and Assam.

Moreover, various educational institutions involved in the school curriculum planning and transaction have been responding to critical population and development issues such as gender equality, environmental protection, health and nutrition and observance of small family norm. *The National*

Curriculum for Elementary and Secondary Education prepared by National Council of Educational Research and Training in 1988 reflected these concerns and facilitated their integration in the school curriculum throughout the country. The latest *National Curriculum for School Education* developed by NCERT in 2000 provides more comprehensive treatment to the crucial population concerns.

Educational programmes such as Environment Education and Health Education have also been contributing to the integration of population concerns in the teaching-learning process at primary and secondary stages.

The National Population Education Project (NPEP) being implemented in the country since 1980 has made concerted efforts to integrate critical population concerns in the content and process of school education and teacher education. By doing so, it has been trying *to enable the school education system to make the learners aware of the inter-relationship between population, resources, environment, development and quality of life and inculcate in them positive attitude and value orientation so that they take informed decisions regarding population and development issues by observing small family norm.*

As stated in the ICPD Programme of Action, 1994, all Governments should assess the underlying causes of high child mortality and should, within the framework of primary health care, extend integrated reproductive health care and child health services, including safe motherhood, child survival programmes and family planning services, to all the population and particularly to the most vulnerable and under served groups. Such services should include prenatal care and counseling, with special emphasis on high risk pregnancies and the prevention of sexually transmitted diseases and HIV infection; adequate delivery assistance, and neonatal care, including exclusive breast-feeding, information on optimal breast-feeding and on proper weaning practices, and the provision of micro-nutrient supplementation and tetanus toxic, where appropriate. Interventions to reduce the incidence of low birth weight and other nutritional deficiencies, such as anemia, should include the promotion of maternal nutrition through information, education and counselling. All countries should give priority to efforts to reduce the major childhood diseases, particularly infectious and

parasitic diseases, and to prevent malnutrition among children, especially the girl child, through measures aimed at eradicating poverty, illiteracy and ensuring that all children live in a sanitary environment and by disseminating information on hygiene and nutrition and promoting literacy especially of girls and women. It is also important to provide parents with information and education about childcare, including the use of mental and physical stimulation.

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CHAPTER - 6

POPULATION DISTRIBUTION : URBANIZATION AND MIGRATION

Population distribution denotes the way the people are spaced over the earth surface. Distribution of population as rural and urban has gained much attention in recent years due to the growing urbanization and migration. It is being observed by experts that by the time population stabilizes by the end of this century, the proportion of rural population will be a very small minority (Salas, 1986). On the other hand, concentration of population in urban areas both in developed and developing countries is an intrinsic dimension of economic and social developments with both positive and negative aspects. The greatest challenge for the world is to cope up with the enormous strain, the rapid urbanization (as a result of both growth in population and migration) will place on social and infra-structural facilities, families, environment and human values.

The demands of the urban future will test the pledges made by the world's governments at the series of global conferences on social development which started in 1992 and concluded in June 1996 with the International Conference on Human Settlements (HABITAT II) in Istanbul. Meeting their universally agreed goals is vital for the future of cities and for all prospects for human development.

Among the most specific goals are those of the International Conference on Population and Development (ICPD) held in Cairo in 1994. The ICPD goals of providing universal primary health care including reproductive health care, family planning and sexual health, closing the gender gap in education, providing education for all by 2015, and ensuring equality and autonomy for women are essential for dynamic urban growth (UNFPA, 1996a and UNFPA, 1996b).

Concept of Urbanization

Urbanization is defined as the process of becoming urban, moving to cities, changing from agriculture to other pursuits common to cities and corresponding behaviour patterns.

Urbanization is a process involving two aspects: (i) the movement of people from rural to urban places where they engage in primarily non-rural functions or occupations and (ii) the change in their life-style from rural to urban with its associated values, attitudes and behaviours. The important variables in the former are population, density and economic functions; the important variables in the latter depend on social, psychological and behavioural factors. These two aspects are mutually supportive.

Urbanization is thus a product of economic, social and political processes which is in the context of a culture operate to create spatial patterns of population distribution

A review of changes in the concept and definition employed for treating a place as urban in the recent census of India clearly shows that the civic or statutory status of a place has served as the most crucial factor for treating it as the urban in India. In addition some places having certain conspicuous demographic features were also treated as the urban since the beginning of census operations in India. The definition of an urban area has remained fairly constant throughout the period, however, this was made more explicit and has been applied more rigorously and uniformly since 1961

The definition of urban area, as per the 1991 Census is as follows

- (a) All statutory towns i.e. places with a municipality, corporation, cantonment board or notified town, area committee, etc.
- (b) All other places which satisfy the following criteria:

- (i) minimum population of 5000;
- (ii) at least 75 per cent of male working population engaged in non-agricultural pursuits, and
- (iii) a density of population of at least 400 persons per sq km.

Besides the Directors of Census Operations in States/UTs were allowed to include, in consultation with the concerned State Governments/Union Territory Administrations and the Census Commissioner of India, some places having distinct urban characteristics as urban even if such places did not strictly satisfy all the criteria mentioned under category (b) above.

Apart from these, the outgrowths of cities and towns also have been treated as urban. These outgrowths include "fairly large well recognized railway colony, university campus, port area, military camp, etc. which might have come up around a core city or statutory town...."since such areas are already urbanized ..although a few of them may not satisfy some of the prescribed eligibility tests to qualify themselves as independent urban units have been termed as outgrowth (OGs) and reckoned along with the town" Each such town together with its outgrowth(s) is treated as an 'urban agglomeration'. This concept of urban agglomeration was adopted in 1971 in lieu of the old concept of town group which was introduced in 1961. An *"urban agglomeration"* denotes *"a continuous urban spread and normally consists of a town and its adjoining urban outgrowths (OGs),. or two or more physically contiguous towns together with contiguous well recognized outgrowths if any, of such towns"*.(Census of India, 1991).

It is customary to classify the urban places into six class categories and present the census data pertaining to the number and population of the towns. These categories are

| SIZE-CLASS | POPULATION RANGE |
|------------|--------------------|
| I | 1,00,000 and above |
| II | 50,000 - 99,999 |
| III | 20,000 - 49,999 |
| IV | 10,000 - 19,999 |
| V | 5,000 - 9,999 |
| VI | Less than 5,000 |

In order to arrive at a meaningful interpretation of data on changes in the size-class composition as well as trends in urban population concentration, the last 3 size-classes have been re-grouped into one category. Thus, the above mentioned size-class hierarchy has been modified in the following manner:

| CATEGORY | SIZE-CLASS | POPULATION RANGE |
|--------------|------------|--------------------|
| City | I | 1,00,000 and above |
| Large Towns | II | 50,000 - 99,999 |
| Medium Towns | III | 20,000 - 49,999 |
| Small Towns | IV to VI | Less than 20,000 |

Degree of Urbanization

It indicates the absolute or relative number of people who live in the defined urban places. For measuring the degree of urbanization, different types of indices are used. The most widely used and easily understood index for this purpose is

$$U = \frac{u}{p} \times 100$$

(where 'u' and 'p' represent the urban and total population of a country).

Urbanization at the Global Level

In an already largely urban world the growth of cities will be the single largest influence on development in the first half of the 21st Century. Urban population is 2.6 billion, of which 1.7 billion is in developing countries. Urban population is growing faster than world population as a whole. Some cities are experiencing the fastest rates of population growth ever seen. Within ten years, little more than half the people in the world will be living in cities (UNFPA 1996b).

Nearly all the urban population increase will be in today's developing countries. They will account for 92.9 per cent of a 2.06 billion increase in the global urban population between 1970 and 2020. Two out of three urban dwellers live in developing regions: by 2015 it will be more than out of four; by 2025 nearly four out of five. Much of this growth will come in the world's poorest countries, and many of the new urban dwellers, particularly, women and their children will be among the poorest people in the world.

A higher proportion of the world's people live in the biggest cities. There were 83 cities or city systems with populations of more than 1 million in 1950 of which 34 of were in developing countries. Today there number is 280 and this number is expected to almost double by 2015. All the new million-cities and 15 of the world's 19 biggest cities called as mega cities are in developing countries (UNFPA 1996b). The UN coined the term mega city in 1970s to describe cities with 10 million and more residents. In 1975, there were only five mega cities worldwide. By 2015, the number of mega cities will grow to 23 as shown in Table 6.1. Millions of people move from rural to cities to see better life but often find that their lives become more difficult. In many cities 20 to 30 per cent of urban population lives in poor shantytowns. Cities no doubt occupies only 2 per cent of land surface, but puts disproportionate impact on environment.

TABLE – 6.1 : MEGA CITIES OF THE WORLD
(with 10 million or more people)

| 1975 | | 2000 | | 2015 | |
|-------------|------------|----------------|------------|----------------|------------|
| CITY | POPULATION | CITY | POPULATION | CITY | POPULATION |
| TOKYO | 19.8 | TOKYO | 26.4 | TOKYO | 26.4 |
| NEW YORK | 15.9 | MEXICO CITY | 18.1 | MUMBAI | 26.1 |
| SHANGHAI | 11.4 | MUMBAI | 18.1 | LAGOS | 23.2 |
| MEXICO CITY | 11.2 | SAO PAULO | 17.8 | DHAKA | 21.1 |
| SAO PAULO | 10.0 | SHANGHAI | 17.0 | SAO PAULO | 20.4 |
| | | NEW YORK | 16.6 | KARACHI | 19.2 |
| | | LAGOS | 13.4 | MEXICO CITY | 19.2 |
| | | LOS ANGELES | 13.1 | SHANGHAI | 19.1 |
| | | KOLKATA | 12.9 | NEW YORK | 17.4 |
| | | BUENOS AIRES | 12.6 | JAKARTA | 17.3 |
| | | DHAKA | 12.3 | KOLKATA | 17.3 |
| | | KARACHI | 11.8 | DELHI | 16.8 |
| | | DELHI | 11.7 | METRO MANILA | 14.8 |
| | | JAKARTA | 11.0 | LOS ANGELES | 14.1 |
| | | OSAKA | 11.0 | BUENOS AIRES | 14.1 |
| | | METRO MANILA | 10.9 | CAIRO | 13.8 |
| | | BEIJING | 10.8 | ISTANBUL | 12.5 |
| | | RIO DE JANEIRO | 10.6 | BEIJING | 12.3 |
| | | CAIRO | 10.6 | RIO DE JANEIRO | 11.9 |
| | | | | OSAKA | 11.0 |
| | | | | TIANJIN | 10.7 |
| | | | | HYDERABAD | 10.5 |
| | | | | BANGKOK | 10.1 |

Source: Population Reports, February 2003, Series M Number 15, John Hopkins University, Baltimore

In 1950, only the biggest city in the world (New York) had more than 10 million people, today 19 of the biggest have more than 10 million and Tokyo, the largest, has 26.5 million. Three of them – Mumbai, Kolkata and Delhi are in

India with population of 18.1 and 12.9 and 11.7 million respectively. It is projected that very shortly Mumbai will be the second largest city of the world.

Urbanization in India

Urban development in India has continued for a very long period. First trace of it has been found in the Harappa civilization, which prevailed during 2350 B.C. and 1750 B.C. It was flourishing in the North-West part of the Indian subcontinent where a chain of urban centres was found which extended from Iran, Iraq to Greece and Egypt.

With the arrival of British East India Company, the nature of urbanization process changed remarkably. The establishment of the British Imperial Government and the advent of railways and road network in the second half of last century led to the establishment of new port towns. Due to considerable growth in overseas trade during the colonial regime, some prominent port cities like Kolkata, Mumbai and Chennai were set up and these dominated the urban scene along with Delhi and a few other metropolises.

From a modest base of 25.8 million in 1901, the number of urban dwellers has risen to 285.3 million in 2001, marking a more than ten time increase in urban population. The number of towns/urban agglomerations (UAs), which were 1,827 in 1901 increased to 5161 in 2001. There was a steady increase in number of towns till 1951 but due to more rigorous tests applied in 1961 to determine whether a place qualified to be treated as a town or not, many urban places were declassified and hence, the number declined from 2,843 in 1951 to 2,365 in 1961 as shown in Table - 6.2. The percentage of urban population also increased from 10.8 in 1901 to 27.98 in 2001. The annual average growth rate of urban population has also shown an increase from 0.03 in 1901 to 3.16 in 1991.

**TABLE – 6.2 : VARIATION IN NUMBER AND POPULATION ('000S) OF
URBAN AGGLOMERATIONS(UAS) AND TOWNS, SINCE 1901**

| Census Year | Number of Towns/ Urban Areas | Total Pop. (in million) | Urban Pop. In (million) | Urban Pop. as %age of total Population | Decimal Growth Rate of Urban Pop. (per cent) | Average Annual Growth Rate (Urban) | Tempo of Urbanization |
|-------------|------------------------------|-------------------------|-------------------------|----------------------------------------|----------------------------------------------|------------------------------------|-----------------------|
| 1901 | 1827 | 238.4 | 25.8 | 10.8 | - | - | - |
| 1911 | 1815 | 252.1 | 25.9 | 10.3 | 0.35 | 0.03 | (-)0.60 |
| 1921 | 1949 | 251.3 | 28.1 | 11.2 | 8.27 | 0.79 | 0.80 |
| 1931 | 2072 | 278.9 | 33.5 | 12.0 | 19.12 | 1.76 | 0.80 |
| 1941 | 2250 | 318.7 | 44.1 | 13.9 | 31.97 | 2.81 | 1.68 |
| 1951 | 2843 | 361.1 | 62.4 | 17.3 | 41.42 | 3.52 | 2.65 |
| 1961 | 2365 | 439.2 | 78.9 | 18.0 | 26.41 | 2.30 | 0.40 |
| 1971 | 2590 | 548.2 | 109.1 | 20.0 | 38.23 | 3.28 | 1.28 |
| 1981 | 3378 | 683.33 | 159.4 | 23.3 | 46.14 | 3.68 | 1.83 |
| 1991 | 4689 | 844.39 | 217.2 | 25.7 | 36.19 | 3.16 | 1.37 |
| 2001 | 5161 | 1027.02 | 285.3 | 27.98 | 31.13 | - | - |

* Tempo of urbanization has been worked out by subtracting the average annual growth rate of rural population from that of the urban population

Source: *Census of India 1991, Paper 2 Provisional Population Totals Rural - Urban Distribution*
Census of India, 2001

For instance the country took nearly 43 years for its urban population to double from 25.8 million in 1901 to 51.6 million in 1944 and another 26 years for it to increase to 103 million persons. Given the current rate of growth urban population is estimated to take not more than 17 years to double itself from 206.4 in 1990 and reach to a total of over 400 million persons by the year 2007 as shown in Table – 6.3.

TABLE – 6.3 : THE DOUBLING SCHEDULE OF INDIA'S URBAN POPULATION

| Urban Population (in million) | Number of Years it took to double |
|-------------------------------|-----------------------------------|
| 25.8 - 51.6 | 43 (1901-1944) |
| 51.6 - 103.6 | 26 (1943-1977) |
| 103.2 - 206.4 | 20 (1970-1990) |
| 206.4 - 412.8 | 17 (1990-2007) |

Source: Census of India 1991, Population Tables, Paper 2

Three types of changes are to be noted in respect of the distributional aspects of urban population.

Firstly, the rate of the different size classes of cities in total urban population has shifted in favour of large cities than in smaller cities. In 1901, the share of cities with over 1,00,000 population in total urban population was just 26.0 per cent, which had risen to 61.48 per cent in 2001 as shown in Table - 6.4

TABLE – 6.4: NUMBER AND POPULATION OF UTS/TOWNS CLASSIFIED INTO BROAD SIZE CLASS CATEGORIES, 2001

| Class | Size | Number of Cities | | Population (in million) (2001) | Percentage of Urban Population (2001) |
|-------|------------------|------------------|-------|--------------------------------|---------------------------------------|
| | | 1991 | 2001 | | |
| I | 1,00,000 & above | 300 | 423 | 172.04 | 61.48 |
| II | 50,000-99,999 | 345 | 498 | 34.43 | 12.30 |
| III | 20,000-49,999 | 944 | 1386 | 41.97 | 15.00 |
| IV | 10,000-19,999 | 1,171 | 1560 | 22.60 | 8.08 |
| V | 5,000- 9,999 | 739 | 1,057 | 7.98 | 2.85 |
| VI | Less than 5,000 | 198 | 227 | 0.80 | 0.29 |
| | ALL* | 3,697 | 5,161 | 285.35 | - |

* Excluding Jammu & Kashmir, where Census was not held in 1991, Census of India, 2001

Another most important factor in the population share is the growth differential between various size classes of cities. Between 1901 to 2001, the population of cities having over 1,00,00 population has increased tremendously from 6.66 million to 172.04 million, whereas cities with smaller size registered much smaller increase in the same period.

Another important change in spatial distribution relates to growth rate of larger metropolis in the country.

Characteristics of Urbanization in India

- Though India is relatively less urbanized but the size of its urban population is one of the largest in the world.
- The urban growth rate in India is high in itself but is still significantly lower than in several developing countries.
- The urbanization structure of India resembles in many ways that of the socialist countries, including China and the East European countries.
- There is a lopsided concentration of economic activity in towns and cities.
- Urban biased economic policies favour the location of industries and new business ventures in metropolitan areas
- Infrastructures in most large cities are inadequate and municipal services severely over burdened.

Concentrated Urbanization

The twin features namely, slowing down of the pace of urbanization and emergence of a large number of new urban settlements at the city periphery are indicative of the fact that despite a long cherished goal of integrated development of medium and small towns and various efforts to translate these goals into reality, the urban scenario as depicted by the 2001 Census, exhibits the concentrated urbanization pattern as the most conspicuous feature of the urban development. It further implies that in near future, the large cities will continue to grow both inward as well as outward i.e., the sub-urbanization will take place along with the growth of large urban centres themselves. This is due

to spread of industrialization and other ancillary economic activities as a result of liberalisation and globalisation in the neighbouring areas of such places. It is also revealed by the differentials in the urban-rural growth rates that the rural areas adjacent to the large metros particularly mega city like Delhi have experienced a most rapid population growth during the last decade which was almost double to that noted for the Delhi urban agglomeration. This tendency is also expected to be observed in the remaining three mega cities - Mumbai, Kolkata and Chennai and other metropolitan areas. Because, the Standard Urban Areas (SUAs) which were initially delineated in 1971, comprise not only the towns and villages which will get merged into them but also the intervening rural areas which are potentially urban and are thus, expected to be fully urbanized within next couple of decades.

This phenomena of increasing concentration of urban population in cities is even more explicitly reflected through the increase in number and population of cities having one million and more commonly known as million + cities. Figures in Table – 6.5 below indicate that the number of such cities has increased from 1 in 1901 to 35 in 2001 whereas population living in such states increased from 1.5 million to 107.8 million in 2001.

TABLE - 6.5 : NUMBER AND POPULATION OF MILLION + CITIES AS WELL AS PER CENTAGE OF URBAN POPULATION LIVING IN SUCH PLACES 1991-2001

| Census Year | Number | Population (fig. in million) | Percentage of Population w.r.t. Urban Population |
|-------------|--------|------------------------------|--------------------------------------------------|
| 1901 | 1 | 1.51 | 5.84 |
| 1911 | 2 | 2.76 | 10.65 |
| 1921 | 2 | 3.13 | 11.14 |
| 1931 | 2 | 3.41 | 10.18 |
| 1941 | 2 | 5.31 | 12.23 |
| 1951 | 5 | 11.75 | 18.81 |
| 1961 | 7 | 18.10 | 22.93 |
| 1971 | 9 | 27.83 | 25.51 |
| 1981 | 12 | 42.12 | 26.41 |
| 1991 | 23 | 70.66 | 32.54 |
| 2001 | 35 | 107.88 | 37.80 |

NOTES * Million + Cities include urban agglomeration classified on the basis of their total population. Further, only those cities/urban agglomerations which had one million & more population are termed as 'million +' cities.

Source: Census of India, 1991 and Census of India, 2001

The names of 35 cities are given in Table – 6.6. This increased pace of concentration of urban population in the cities, particularly in the million + cities implies that the economic activities are gradually localized in such places. This trend is indicative of the fact that urbanization process in India is gradually being transferred into the process of concentrated urbanization.

TABLE – 6.6 : METROPOLITAN CITIES IN INDIA AND THEIR POPULATION 2001

| S.No. | Name of City/Urban Agglomeration | Population (in million) |
|-------|----------------------------------|-------------------------|
| 1 | GREATER MUMBAI | 16.37 |
| 2 | KOLKATA | 13.22 |
| 3 | DELHI | 12.79 |
| 4 | CHENNAI | 6.42 |
| 5 | BANGLORE | 5.69 |
| 6 | HYDERABAD | 5.53 |
| 7 | AHMEDABAD | 4.52 |
| 8 | PUNE | 3.76 |
| 9 | SURAT | 2.81 |
| 10 | KANPUR | 2.69 |
| 11 | JAIPUR | 2.32 |
| 12 | LUCKNOW | 2.27 |
| 13 | NAGPUR | 2.12 |
| 14 | PATNA | 1.71 |
| 15 | INDORE | 1.61 |
| 16 | VADODARA | 1.49 |
| 17 | BHOPAL | 1.45 |
| 18 | COIMBATORE | 1.45 |
| 19 | LUDHIANA | 1.39 |
| 20 | KOCHI | 1.36 |
| 21 | VISHAKPATANAM | 1.33 |
| 22 | AGRA | 1.32 |
| 23 | VARANASI | 1.21 |
| 24 | MADURAI | 1.19 |
| 25 | MEERUT | 1.17 |
| 26 | NASHIK | 1.15 |
| 27 | JABALPUR | 1.12 |
| 28 | JAMSHEDPUR | 1.10 |
| 29 | ASANOL | 1.09 |
| 30 | DHANBAD | 1.06 |
| 31 | FARIDABAD | 1.05 |
| 32 | ALLAHABAD | 1.05 |
| 33 | AMRITSAR | 1.01 |
| 34 | VIJAYAWADA | 1.01 |
| 35 | RAJKOT | 1.00 |

Source Registrar General of Census commission of India Provisional Population, Census of India, 2001

Factors influencing Urbanization

There are three important factors that influence the urban population growth.

1. Increase in urban population due to natural increase i.e birth minus death.
2. Migration(net) from rural, areas due to:
 - i) Unplanned population growth in the rural areas
 - ii) Reduced demand for labour in farms owing to division of land on one side and improved methods of cultivation on the other
 - iii) The great attraction of big cities due to
 - a) employment opportunities
 - b) improved transport and communication facilities
 - c) enormous advances in basic amenities of life.
3. Extension of boundaries of towns and cities

The estimated population growth attributable to natural increase net (internal) migration and area reclassification along with the percentage share of these three factors are presented in the following Table – 6.7

TABLE – 6.7 : ESTIMATES OF RELATIVE SHARE OF NATURAL INCREASE, NET MIGRATION AND RECLASSIFICATION IN THE DECADAL URBAN GROWTH OF INDIA, 1961-1991*

| CATEGORY | DECADE | | |
|----------------------------------------------------|-----------|----------|----------|
| | 1961-71** | 1971-81+ | 1981-91+ |
| TOTAL URBAN POPULATION GROWTH (in millions) | 30.18 | 49.45 | 56.45 |
| ESTIMATED SHARE (fig. In millions) | | | |
| Natural increase | 19.65 | 20.40 | 33.86 |
| Net Migration | 5.91 | 19.73 | 12.73 |
| Reclassification | 4.59 | 9.32 | 9.82 |
| % SHARE OF | | | |
| Natural increase | 65.21 | 41.75 | 59.98 |
| Net Migration | 19.58 | 39.40 | 22.62 |
| Reclassification | 15.21 | 18.85 | 17.40 |

* Excluding Assam and Jammu & Kashmir for the last 2 decades of 1971-81 and 1981-1991

** Figures pertaining to Natural Increase refers to the residual i.e. Urban growth-number of net intercensal migrants and the Population added due to reclassification of towns as new and declassified towns

+ Figures on net migration have been derived by subtracting the estimated number of persons added on account of Natural Increase and Reclassification.

Sources (s) (i) *Census of India Occasional Paper-I of 1986 "Study on Distribution of Infrastructural Facilities Levels and Trends of Urbanization"* pp 78-79 346-350 (ii) *Census of India, 1981, Part II-4 General Population Tables* pp 1045-1111 (iii) *Computed from Census of India, 1991, Paper No 2 of 1991 Provisional Population Totals Rural - Urban Distribution* pp 56-57 and 171-369

The figures given in Table - 6.7 clearly indicate a significant rise in the contribution of natural increase towards urban population growth in the course of last two decades after an abrupt fall in it earlier. In other words, it indicates a significant reduction in the contribution of net migration towards urban population growth during 1981-91 as compared to that of the preceding decade. The population accounted by the reclassification on the other hand doubled in the first two decades i.e. from 4.6 million to 9.3 million and 9.8 million during 1981-91. Its proportionate share in urban population growth as may also be seen from the above mentioned Table increased very little from 15.2 to 18.8 per cent during the earlier two decades and declined by approximately 2 per cent during 1981-91.

Table - 6.8 presents the variation in the percentage share of these three factors in the decadal urban population growth among the major states.

TABLE - 6.8 : PER CENTAGE SHARE OF NATURAL INCREASE, NET MIGRATION (INTERNAL) AND AREA RECLASSIFICATION IN THE DECADAL URBAN POPULATION GROWTH IN INDIA* AND ITS MAJOR STATES DURING 1961-71, 1971-81, 1981-91**

| India/State | 1981-91+ | | | 1971-81+ | | | 1961-71+ | | |
|----------------|----------|-----------|----------|----------|-------|-------|----------|-----------|-------|
| | NI | NM | AR | NI | NM | AR | NI | NM | AR |
| INDIA | 59.98 | 22.62 | 17.40 | 41.75 | 39.40 | 18.85 | 65.17 | 19.60 | 15.23 |
| Andhra Pradesh | 54.50 | 28.47 | 17.03 | 44.22 | 47.62 | 8.16 | 66.07 | 29.04 | 4.89 |
| Bihar | 85.51 | (-) 10.85 | 25.34 | N A | - | 10.58 | 35.93 | 24.83 | 39.24 |
| Gujarat | 69.90 | 20.21 | 9.89 | 51.91 | 36.16 | 11.93 | 64.36 | 18.26 | 17.38 |
| Haryana | 62.08 | 27.23 | 10.69 | 36.49 | 38.01 | 22.50 | 77.85 | 16.13 | 6.02 |
| Karnataka | 74.84 | 12.32 | 12.84 | 33.45 | 55.32 | 11.23 | 74.34 | 15.69 | 9.97 |
| Kerala | 29.86 | 1.40 | 68.74 | 51.68 | 7.79 | 40.53 | 49.96 | (-) 12.06 | 62.10 |
| Madhya Pradesh | 56.83 | 14.28 | 28.89 | 39.80 | 40.10 | 20.10 | 69.46 | 19.79 | 10.75 |
| Maharashtra | 56.96 | 30.52 | 12.52 | 46.52 | 48.46 | 5.02 | 60.03 | 32.21 | 7.76 |
| Orissa | 60.70 | 24.80 | 14.50 | 29.18 | 48.95 | 21.87 | 30.97 | 39.92 | 29.11 |
| Punjab | 81.54 | 23.37 | (-) 4.91 | 45.38 | 39.90 | 14.72 | 84.90 | 12.94 | 2.16 |
| Rajasthan | 65.26 | 25.95 | 8.79 | 38.51 | 41.42 | 20.07 | 81.95 | 8.23 | 9.82 |
| Tamil Nadu | 92.44 | (-) 2.31 | 9.87 | 61.13 | 33.06 | 5.81 | 72.48 | 13.59 | 13.93 |
| Uttar Pradesh | 62.82 | 27.22 | 9.96 | 33.65 | 23.40 | 42.95 | 75.56 | 8.28 | 16.16 |
| West Bengal | 50.00 | 29.71 | 20.29 | N A | N A | 18.87 | 64.18 | 17.02 | 18.80 |

NOTE NI-Natural Increase NM-Net Migration AR-Areal Reclassification and N/A-Not Available

Noteworthy States among these are Bihar, Karnataka, Punjab and Tamil Nadu where 75 per cent and more of the urban population growth during the last decade appear to have been accounted by this factor alone. In Tamil Nadu, this proportion is even more than 90 per cent. Further, contribution of net migration is found to be on the negative side in Bihar and Tamil Nadu the proportion of net migration as worked out by separating out the proportion attributable to the natural increase and areal reclassification from the urban population growth comes to (--) 11 per cent in Bihar and in case of Tamil Nadu, it is slightly more than (--) 2 per cent thereby showing a large volume of out-migration than the immigration to the urban areas of these States in the last decade. In Kerala also, its share is quite insignificant i.e. little more than 1 per cent only. Major States, Maharashtra and West Bengal have shown a considerably large share (around 30 per cent) of the net migration. This large share of net migration towards the urban population growth in these two States is indicative of the fact that Mumbai and Kolkata are still attracting a large number of migrants who are getting absorbed if not in these mega cities then in the cities and towns situated in the respective city regions. Lastly, the contribution of the third factor namely, area reclassification towards the State's urban population growth also shows wide fluctuations over the decades. For example, while in Andhra Pradesh, Karnataka and Madhya Pradesh, it increased continuously over the decades Gujarat and Orissa showed an opposite trend. Moreover, its contribution towards the State's population growth in the last decade is found to be most significant (more than two-third) in Kerala only. Apart from this, a few other States namely, Bihar, Madhya Pradesh and West Bengal also have shown a relatively large share (i.e. between 20 to 30 per cent) of this factor in the urban population growth during the last decade.

A study of the pattern of relationship between the level and trend of urbanization on one hand and three economic and socio-demographic indicators of development on the other is presented in Table – 6.9 below which reveals that all the developed States (except Haryana) having higher per capita Net Domestic Product (NDP) had a higher level of urbanization and undeveloped or developing

States having low per capita NDP had a low level of urbanization than the national average.

TABLE – 6.9 : INDICES OF URBANIZATION AND ECONOMIC, SOCIAL AND DEMOGRAPHIC DEVELOPMENT IN INDIA AND ITS MAJOR STATES

| India/State | Per cent Urban (1991) | Average Annual Growth Rate Urban (1981-1991) | Per Capita Net Domestic Products (NDP) (1988) | Literacy Rate (1991) | Infant Mortality Rate (IMR) (1990) |
|----------------|-----------------------|----------------------------------------------|-----------------------------------------------|----------------------|------------------------------------|
| INDIA | 25.72 | 3.09 | 777 | 52 | 80 |
| Andhra Pradesh | 26.84 | 3.55 | 758 | 45 | 70 |
| Assam | 11.08 | 3.27 | 605 | 53 | 76 |
| Bihar | 13.17 | 2.65 | 482 | 38 | 75 |
| Gujarat | 34.40 | 2.90 | 860 | 61 | 72 |
| Haryana | 24.79 | 3.58 | 1233 | 55 | 69 |
| Karnataka | 30.91 | 2.55 | 799 | 56 | 70 |
| Kerala | 26.44 | 4.76 | 639 | 91 | 17 |
| Madhya Pradesh | 23.21 | 3.71 | 583 | 43 | 111 |
| Maharashtra | 38.73 | 3.27 | 1039 | 63 | 58 |
| Orissa | 13.43 | 3.08 | 535 | 49 | 122 |
| Punjab | 29.72 | 2.56 | 1652 | 57 | 61 |
| Rajasthan | 22.88 | 3.31 | 646 | 39 | 84 |
| Tamil Nadu | 34.20 | 1.76 | 828 | 64 | 59 |
| Uttar Pradesh | 19.89 | 3.29 | 607 | 42 | 99 |
| West Bengal | 27.39 | 2.54 | 860 | 58 | 63 |

Source(s) (1) Census of India, 1991, Paper Nos 1 and 2. Provisional Population Totals Page Nos 73 (Paper- 1) and 19 and 51 (Paper No.2)

(2) Government of India (Central Statistical Organization) Statistical Year Book, 1989 p 345

(3) Registrar General, India, Sample Registration Bulletin Vol XXVI No 1, June, 1992 p 3

A similar pattern also emerges when level of urbanization is viewed in the contest of level of literacy among the major States. Exceptions to this trend are however, noted in Assam and Haryana on the one hand which had a higher level of literacy but a low level of urbanisation and in Andhra Pradesh on the other, which had a low level of literacy but the level of urbanization was higher than the national average. Further, the States showing a low level of Infant Mortality Rate (IMR) or in other words having a better health status showed a higher level of urbanization and those having a higher level of IMR had a lower level of urbanization with the exceptions of Haryana on the one hand and Gujarat on the other)

The relationship between the pace of urban population growth and the above stated indicators of development revealed a reversal in the trend. That is

while those States having higher values with respect to the per capita NDP and literacy rate have shown a low average annual growth rate of urban population during the last decade and those having a lower value for these indicators showed a higher growth rate of urban population. Exceptions to this trend were, however, noted in certain States such as Andhra Pradesh, Haryana, Kerala and Maharashtra which had a higher per capita NDP and also a higher growth rate as against Bihar which had a lower per capita NDP and a lower growth rate than the national average. Whereas, in case of literacy rates Assam, Haryana, Kerala and Maharashtra revealed a higher literacy rate and higher growth rate and Bihar showed an opposite trend. As shown in Table – 6.9 in major States where the IMR was higher than the national average, the pace of urban population growth was faster than that noted at the national level. As against these, in a majority of the States having high IMR, the pace of urban population growth was slower than Kerala having the lowest IMR (17) and maximum urban growth rate (4.76) followed by Andhra Pradesh, Assam, Haryana and Maharashtra, where the pace of urban population growth was found to be higher than the all India average.

This phenomenon of a relatively slower pace of urban population growth in the developed States and of a faster pace in the less developed States in future may largely be due to the fact that while the developed State, as stated earlier are already more urbanized and hence are likely to have less growth potential than the developing States which are still catching up the momentum of urban growth in the recent time

Consequences of Urbanization

- 1 India is much less industrialized than today's developed countries were in the past. Also the process of tertiarisation of its economy has outpaced its secundarisation. As a result, urban unemployment and underemployment are widespread, and income levels are low.

2. Indian cities are growing faster than the capacity of the economy to support them. This escalates the costs of urbanization for the country. It is further argued that cities do not generate enough surplus to invest in basic urban services, and are dependent on the transfer of resources from rural areas. This leads to less than optimal allocation of resources between the rural and urban sectors. The pace of economic growth suffers in the process.
3. The existing urban infrastructure and services, such as power, water supply, health, education, transport and others is inadequate to meet the large and fast expanding urban population. Problems relating to environment, congestion, and pollution are intensifying. The quality of urban life is fast moving towards a crisis situation.

The Population Crisis Committee in its study in 1998 has identified 10 indicators for defining city life. Each indicator accounts for 10 points on the study's 10 point scale of urban livability. Individual city scores ranged from a high of 86 to a low of 19. The cities were further divided into four rankings: Very Good, Good, Fair or Poor. From the Third World, only the city-state of Singapore is placed on the 'Very Good' category. All the nine cities of India are in the poor category. The ten indicators are (1) Public Safety – Murders per 100,000 people, (2) Food Costs – Per cent of income spent on food, (3) Living Space – Persons per room, (4) Housing Standards – Per cent of homes with water and electricity, (5) communications – telephones per 100 persons, (6) Education – Per cent of children in secondary schools, (7) Public Health – Infant deaths per 1,000 live births, (8) Peace and Quiet – Levels of ambient noise, (9) Traffic Flow – Miles per hour in rush hour, (10) Clean Air – alternate pollution measures

Urban economic growth and job creation have not kept pace with the population growth. This has led to a deepening of poverty. In Mumbai and Kolkata between 35 and 50 per cent of residents live in slums, lacking most of the basic services.

The over urbanization thesis in the Indian context has, thus, been advanced on the grounds that:

- there is a mismatch between the levels of industrialization and urbanization;
- the process of urbanization is costly and impinges upon the rate of economic growth, and
- the state of infrastructure is poor and unable to take the growing urban pressures.
- The problem that causes the most concern to a majority of urban dwellers is that of shelter.
- Around one-fifth of India's urban population lives in slums. This proportion is rising with time. The growth rate of the slum population, largely through continuing immigration is significantly faster than that of other segments of the urban population.

Future Urban Development

The urban growth in India has not kept pace with the growth of the urban population. The infrastructure of many of the largest cities is breaking down under the strain of having to cater to ever increasing numbers. This has led to deepening of urban poverty. Reducing the pressure of this component requires substantial improvement in social development like empowerment of women including reproductive and sexual health access to services for both men and women, rich or poor and a better overall quality of life.

The urban future also carries many risks for the physical environment and natural resources, for social cohesion and for individual rights but it also offers vast opportunities. The experiences of large cities as concentrations of human activities and the highest forms of social organization suggests that the future will open new avenues for human development. Cities provide capital, labour and market for entrepreneurs and innovators at all levels of economic activities. Cities also speed social transformation. Indicators of health, literacy and social

mobility are all high in urban areas. Among all, urban development reduces the gender gap in education, access to reproductive health services and fairly paid waged employment.

The challenge of the urban future will be to sustain progress in social development in the face of unprecedented population pressure. The main policy issue in urban areas is how to help the poor to come out of this vicious circle of poverty and large family size.

A large number of medium and small towns will have to be given the necessary impetus by way of investment, particularly investment in infrastructure, social services and provision of essential basic services, so that they develop in a desirable manner. Attention should be given for the development of local areas and resources. Conditions in both rural and urban areas must be improved. Policies should encourage sustainable rural development by creating labour intensive projects, training rural youth for non-farming jobs and ensuring effective transport and communications. Decentralisation of administration and services should be considered for facilitation of local development. Industries and business should be encouraged to relocate from urban to rural areas. Infrastructure improvement and environmental protection should be carried out in both urban and rural areas.

The alarming consequences of urbanization in many countries are related to its rapid pace to which governments have been unable to respond with their current management capacities and practices. Particular attention should be paid to the economical land use. High priority should be given to improving the security and quality of life, improvement of basic infrastructure (education, health services, vocational communication and transformation, etc.) services and problems resulting from over-crowding. People living in urban slums, and in areas prone to natural and man made disasters also need attention. Special attention is required for the management of water, waste and air as well as environmentally sound energy and transport systems.

Migration

Concept of Migration

Population change in an area is the result of one or more of the three demographic processes : fertility, mortality, migration. Migration differs from the first two processes in that:

1. It is not a biological process;
2. A move necessarily involves leaving one place and going to another and, therefore, necessitates the examination of two populations - one at the point of origin, and the other at the point of destination; and
3. It is not universal and, therefore, has no upper limit or lower limit - it does not happen to everyone - a group can experience no movement in or out of its territory and on the other hand groups can move from one place to another.

A person who changes residence from one country to another, or from one part of a country to another part is called a migrant. This process of movement from one place to another is called migration. This movement can take place in the following three ways:

1. When the change of residence is across national boundaries, this is termed International Migration
2. When the change of residence is from one community to another, while remaining within the country, this is called internal migration.
3. When the change of residence is within the same community, this is termed as local movement.

Since local movement does not affect the size and composition of the population of the community, the study of migration is mainly concerned with international and internal migration

Some Important Terms Associated with Migration

‘Who is a migrant?’ While answering this question one has to consider several issues. The first one is the choice of migration-defining boundaries. In most cases, choice is limited, since one has to follow the legal boundaries. The choice of boundaries for defining internal migration must usually be between three . (i) provincial or state boundaries; (ii) district boundaries; and (iii) the boundaries of the civil division, such as city, town, village, etc.

Internal migration is defined as that taking place across state boundaries only, many movements within the state will not be considered to be migration and hence the estimates of migration will be on the low side. On the other hand, if migration is defined on the basis of boundaries of each city or town or village, will it give the correct estimate of migration? Should a person who goes temporarily to hill-resort during the summer months be considered a migrant? Is a student who goes away for studies and stays in a hostel, a migrant? In fact, a condition usually taken into consideration while defining migration is the intention of the person to settle permanently (or semi-permanently) at the new destination. From this point of view the person going to a hill-resort is not a migrant but the student is defined as a migrant since he does not know as to when he will return, or even whether he will return at all

Thus, a migrant is a person who has changed his residence from one geographically well-defined area to another area with the intention of permanently or semi-permanently settling at the new place. The place which the migrant leaves is called the place of origin and, for that place, the person is an out-migrant. The place where the migrant arrives is known as the place of destination and, for that place, the person is called an in-migrant. Thus, the same person is an out-migrant for the place of origin and an in-migrant for the place of destination. When the migration takes place across international boundaries, the terms used are emigration and immigration For a given

geographical area, where the in-and out-migrations take place continuously, the net change in the population over a period of that particular area grows.

The analysis of migration is usually carried out by breaking up the total time period into a series of intervals and assembling data separately for each interval. Intervals of ten years have generally been used in migration analysis

Causes of Migration

The main causes of migration are:

(i) Economic - Employment, business or search for a job in the urban areas.

(ii) Social

(a) Education (specially higher education, the facilities for higher education being concentrated in the urban areas)

(b) Family Movement : People in transferable jobs or head of the families migrating to another place, thereby the entire family undergoes a change of residence

(c) Marriage : Migration on account of marriage, especially among women is very common in a dominant patriarchal society like India where after marriage, the girl moves to her husband's house and village/towns. This type of migration is more common in the rural areas and is the maximum among the different various streams of migration

(iii) Political

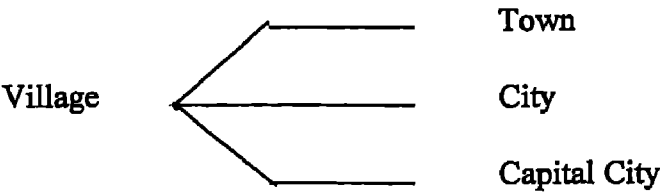
People tend to out migrate from their places on account of political instability like wars, civil unrest, religious persecution and take refuge in towns/cities/countries of relative stability and protection

(iv) Other Reasons

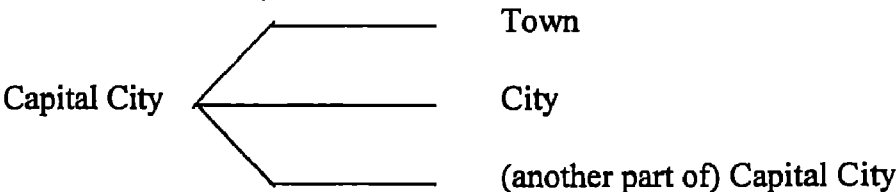
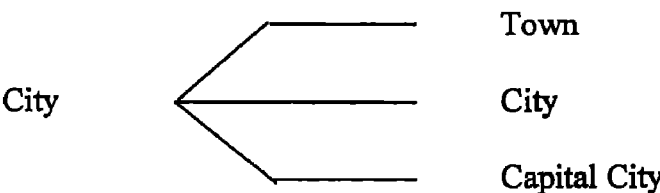
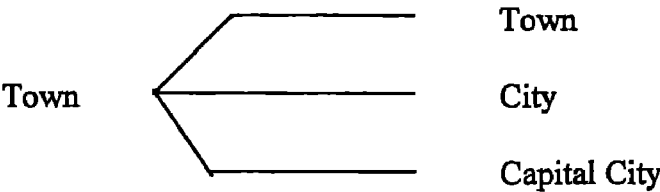
Migration may also occur on account of natural calamities like floods, earthquakes, volcano eruptions, typhoons, etc , industrial disasters, or any other such causes.

TYPES OF INTERNAL MIGRATION STREAMS

**RURAL
TO URBAN**



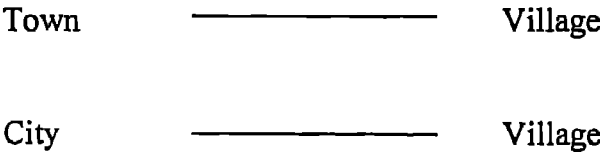
**URBAN
TO URBAN**



**RURAL
TO RURAL**



**URBAN
TO RURAL**



Migration trends in India

The volume of internal migration in India is still not large. A study of internal migration indicates the existence of the above mentioned four types of migration streams. Table - 6.10 gives the pattern of distribution of migrants by sex in these four types of streams for 1961, 1971, and 1981.

TABLE – 6.10 : PERCENTAGE OF DISTRIBUTION OF INTERNAL MIGRANTS BY SEX-INDIA, 1961, 1971 AND 1981

| MIGRATION STREAM | 1961 | | | 1971 | | | 1981 | | |
|------------------------|-------|------|--------|-------|------|--------|-------|------|--------|
| | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| R to R | 73.7 | 56.7 | 81.3 | 70.3 | 53.5 | 77.8 | 65.2 | 45.4 | 73.4 |
| R to U | 14.6 | 25.7 | 9.7 | 15.5 | 26.0 | 10.5 | 16.6 | 27.7 | 12.0 |
| U to U | 8.1 | 13.0 | 5.8 | 8.9 | 14.0 | 6.7 | 12.1 | 19.3 | 9.0 |
| U to R | 3.6 | 4.6 | 3.2 | 5.5 | 6.5 | 5.0 | 6.1 | 7.6 | 5.5 |
| TOTAL | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Migrants In million | 134.4 | 41.4 | 93.0 | 156.6 | 48.3 | 108.2 | 201.3 | 59.2 | 142.4 |

Source. Registrar General of India, Census of India, 1981

In India, the major migratory movements are rural to rural, particularly among females. About two-thirds of the total migration stream in 1981 is accounted for by rural to rural migration, this form of migration has declined steadily since the 1961 census, whereas rural to urban migration has shown an increase. Much of the census-defined migration is accounted for by traditional migration streams - season, circular or marital. The most important rural to rural migratory flows are dominated by short-distance (within district) migration, and within that female migrants dominate. The predominant form of migration in India is thus rural to rural female migration, most of which is marriage migration.

However, though in terms of magnitude rural to urban migration accounts for only about one-sixth of the total migration stream in India, it assumes great

importance both because it is usually influenced by economic considerations and because of its contribution to the process of urbanization and development.

The bulk of the movement of people is from one rural area to another rural area and females predominate in this category. Apparently this is due to girls leaving their parent's houses due to marriage and going to live in their husband's places. Another example of rural to rural movement is the development and resettlement of new areas generally associated with large irrigation projects. From the socio-economic angle, the most significant movement is from rural to urban areas resulting in increasing urbanization as discussed earlier. Such a movement is prompted by expected opportunities for employment and the attraction of a brighter life. Unfortunately, these expectations for many often remain unfulfilled. There is a relatively small movement from urban to rural areas mainly for living in a tension and pollution free-atmosphere. Urban to urban movement is also small and is generally from small towns to larger cities. Internal migration has been a process since the dawn of history but it is now much accelerated as a result of modernization and improvement in transport.

Consequences of migration

Migration provides wide opportunities to the people to improve their quality of life. If those who migrate in search of employment, education, business purposes are able to achieve their goals, they improve not only their life-style but also improve the quality of living of the members of their families. Migration on account of natural and political disasters brings relief to the grief stricken families and also stability in their lives.

However, migration also has its negative effects on the areas to which migration takes place. The current pattern of migration shows an excessive concentration of population from rural to the urban areas. This has resulted in the creation of.

(i) **Slums and Squatters/Settlements**

There is acute housing shortage in the cities, with the result a large number of rural poor migrants tend to live in squatters/settlements and slums. It is estimated that nearly 30 to 40 per cent of the population in the Class I cities of India lives in squatters/settlements and slums.

(ii) **Shortage of Public Transport System**

The public transport system is not able to cope up with the increase in passenger-traffic. The result is over-crowding delays in trips, break down of transport services, frequent arguments with fellow passengers over seat-sharing, pick-pocketing, eve-teasing in the buses/trains, or other social evils added to the acute shortage of number of vehicles required to meet the demands of the growing population.

(iii) **Infrastructure**

The cities with a high rate of migration find themselves incapable of meeting the demands of the people for basic services like clean drinking water, electricity, sewerage and garbage disposal services. Nor are they able to provide enough medical service centres, schools, colleges and other institutions of learning or other such service centres, as also shortage of jobs.

The cities become centres of scarcity, get choked with air, water and noise pollution, get infected by social and political evils, there is a general fall in the moral and ethical values, resulting in overall degradation of the quality of life in cities.

International Migration

International migration is highly controlled at the global level. Every country has set its own quota system and adopts a certain quality and quantity control with respect to foreign migrants. International migration in the form of illegal migrants, refugee migrants, infiltrates, however, is a matter of great concern for the receiving countries. They adopt stringent measures to check

illegal migration including the deportation of migrants. However, the countries do adopt a somewhat sympathetic attitude towards refugee migrants (especially political refugees).

The migration process has a significant effect on both the communities of origin and the communities of destination. Demographically, migration affects the sex-age composition of the population of the areas from which people come and the areas in which they finally settle. It brings social and economic changes. In most nations, there are areas of high and low fertility and also areas of expanding opportunities for employment and of stationery or declining economic opportunities. A shift of population from areas of high birth rate to those of low birth rate, from areas of declining economic opportunities to areas with expanding opportunities, acts as a device for maintaining demographic, social and economic balance among communities.

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SECTION : II

PROJECT IMPLEMENTATION STRATEGIES

Chapter - 7 : Population Education : A Reconceptualised Framework

Chapter - 8 : Curriculum Development in Population Education

Chapter - 9 : Teacher Training in Population Education

Chapter - 10 : Co-Curricular Activities in Population Education

Chapter - 11 : Evaluation and Research in Population Education

Chapter - 12 : Programme Management in Population Education

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CHAPTER - 7

POPULATION EDUCATION : A RECONCEPTUALISED FRAMEWORK

Introduction

Population education which emerged as an educational innovation in response to population problems only about four decades ago, is now being experimented in over a hundred countries of the world in none-too-uniform a manner (Sikes, 1993). It has been introduced in the education systems of different countries as an important component of the multi-pronged strategy employed to help nations attain the goals of population stabilization and sustainable development. Very few educational programmes have matched its pace of expansion and adopted such varied conceptual frameworks and strategies of curriculum transaction (Cruz, 1978). Perhaps no other educational concept has experienced such frequent changes in its framework as the concept of population education. This has been so because of not only the nature of the context in which it emerged but also its newness and its complex characteristics (Sharma, 1988).

The Context

The concept of population education emerged in the context of population and development- the two most pressing issues before humankind today. Both are closely interrelated and both encompass a number of complex factors. Viewed as an epiphenomenon of the process of development, population issues have aroused widespread concern among almost all the members of the comity of nations. There have been undaunted endeavours to accelerate the pace of socio-economic development through the instrumentalities of science &

technology and to secure distributive justice for the people through different institutional mechanisms. But those have been confronted with some basic population related questions of how many people are going to inhabit the earth, how they are to be supported and enabled to make their contributions to development efforts, what they are going to bequeath to posterity and how long they are going to be sustained by the natural and human resource base (Seshadri, 1991)

The rapid population growth and the concomitant problems of poverty, lack of adequate health and educational facilities, malnutrition, non-fulfilment of even the basic needs of a vast majority of the populace, paucity of employment opportunities, dwindling natural resources prompted by the increasing number and growing consumerism, irrational use of technology, and consequent environmental degradation constitute critical dimensions of the present population and development phenomena. It is also pertinent to note that the population phenomenon today embraces issues beyond development. While the size, growth, composition and distribution of population have a close bearing on socio-economic development, the population related issues also bring forth concerns for the "carrying capacity" of biological and ecological system, gender equities, reproductive health and reproductive rights of couples and family as a basic social unit.

Need for Population Education

It has been gradually realised that since the interrelationship between population and development is highly complex and population problems are multidimensional, it will not yield to any single solution. The right to development is a universal and inalienable right of every human being, the fulfillment of which depends on the realisation of the balanced interrelationships between population, resources, environment and development. This interrelationship may be brought into a harmonious balance primarily by changing the demographic profile of different nations. Changes in the demographic profile of a nation depend largely

on attitudes and behaviours of individuals in respect of population and development issues. The demographic behaviour is to a great extent informed by **population socialisation**, a process by which people acquire norms, values, attitudes and belief systems in respect of population related issues and which is embedded within the larger complexes of social practices reflecting the society's internal logical system. This process is greatly influenced by education which enables the individual to know the phenomenon of population change and its consequences (UNESCO, 1978). It is commonly observed in many countries that the knowledge of the simple facts of population change, let alone the complex interrelationships with other parameters, is very low even among educated people. It is precisely because of these reasons that population education has emerged as an integral part of the multi-pronged strategy employed to solve contemporary population and development related problems that face the nations.

Emergence of Population Education

The idea that education can play a potential role in addressing population problems was first mooted in Sweden in 1935. The Population Commission of Sweden, which expressed its concern on the declining rates of birth in that country, recommended a comprehensive and truly vigorous educational campaign to clarify population related issues aimed at influencing the fertility behaviour of individuals (Jacobson, 1979). However, nothing noteworthy happened during the next two decades. It was in the 1960s that the matter was seriously reconsidered in the United States. Warren S. Thompson and Philip M. Hauser published papers in March 1962 issue of ***Teachers College Record***, Columbia University reiterating the inclusion of population content in the school curriculum (Sharma, 1988).

In view of the rapid pace of population growth in the fifties and sixties efforts were initiated in a number of countries to arrest population growth; and motivational activities for adults provided information about the consequences of

high birth rate. The information, education and communication "IEC" or information education and motivation "IEM" strategy was employed in family planning programmes to achieve the desired objectives. However, in the developing world the "IEC" activities of family planning programmes were not always as successful as had been expected. It was in this context that the potential of education was realised in order to overcome deeply entrenched traditional learning that influenced demographic behaviour of the people. The school education, in particular, was considered effective for achieving this objective. However, the nomenclature of population education was given to this educational innovation at a later date.

The first national endeavour to evolve and concretise the concept of population education was made in India in 1969 and then in the Philippines and the Republic of Korea in 1970. **The Workshop on Population and Family Education** sponsored by the UNESCO Regional Office for Education in Asia held in September 1970 at Bangkok, was a landmark in the history of population education. It not only facilitated the identification of objectives of population education, the selection of suitable contents and the consideration of strategies for the introduction of population education into formal and non-formal education systems but also resulted in the launching of national population education programmes by many countries in Asia (Hutabarat, 1979). Similar activities were initiated by UNESCO Regional Offices in Santiago (Latin America and Caribbean) and Dakar (Africa South of the Sahara). The United Nations Population Fund (UNFPA), previously known as United Nations Fund for Population Activities, played a vital role in appreciating the potential of population education and providing funds for national programmes from the late sixties onwards. Population education emerged as an educational innovation during 1970s and various countries initiated activities to introduce it into their ongoing education systems. The recommendations of the **World Population Plan of Action**, adopted at the 1974 World Population Conference held in Bucharest, also encouraged nations to adopt the strategy of population education.

Population Education and Other Concepts

In the initial phase of its evolution, however, there were several misconceptions regarding population education, as it was popularly equated with family planning or family planning education, primarily because of its emergence in close association with the "IEC" (Information Education and Communication) or "IEM" (Information Education and Motivation) activities of the family planning programmes. Population education, however, differs from the related areas such as family planning education, sex or sexuality education, family life education, and population studies, in that its need arose under special historical circumstances and some typical contemporary issues. Family planning education was initiated with a view to conveying specific messages focused on the need to control population growth. Sex education originally developed in response to the concern for changing sexual mores and increasing incidence of deviant sexual behaviour, venereal diseases and out of wedlock pregnancies. Family life education grew out of a recognition of the growing evidence of family instability and disintegration. Population studies evolved not as a separate discipline but as an inter-disciplinary body of knowledge by bringing together facts, theories and concepts based on the research studies conducted by the specialists of different disciplines and professional fields for explaining various facets of population phenomenon. Population education emerged as an educational response to the concern for population problems emanating from the changing inter-relationship between population and development.

Population Education : Evolution of the Concept

Ever since its inception the conceptual framework of population education has been undergoing changes quite frequently because of the changes in the perception of population phenomenon and its relationships with development. Every time there was a change in the perception of population issues, a need was felt to reconceptualise population education. Although the changes that

have occurred in the conceptual framework of population education in different countries over the years have reflected the context-specific variations, there has been an overarching commonness in them. In India, the first attempt to conceptualise population education was made in the **National Seminar on Population Education** organised in Bombay in August 1969 (NCERT, 1969). The Seminar made an attempt to define population education in the context of Indian situation, but more importantly, expressed the national consensus for introducing this educational innovation in the education system of the country. The concept of population education was initially defined on the basis of the following recommendations of the National Seminar on Population Education held in August 1969

- "The objective of population education should be to enable the students to understand that family size is controllable, that population limitation can facilitate the development of a higher quality of life...."
- "Students at all levels have a right to accurate information about the effect of changes in family size and national population on individual, family and nation "
- "Population should not be treated merely as a quantitative phenomenon
 ^ It is the quality of the population that is most relevant both as a factor of growth and an end product of growth "

In pursuance of the recommendations of the National Seminar, a **Population Education Syllabus** was developed by National Council of Educational Research and Training (NCERT) in 1971. It defined population education as an educational intervention to make the target groups aware of the multi-faceted population phenomenon so that it leads them eventually to take rational decisions concerning population matters (NCERT, 1971). The syllabus contained a scheme of content which was developed by drawing contents from the six major areas - **population growth, population and economic development, population and social development, population health and**

nutrition, population, biological factors and family life and ecological considerations and population. Population education was treated by it as a demography-laden concept, predominantly as education in demography and population studies. The National Population Education Project launched in India in 1980 made an attempt to integrate the elements of these content areas in the school curriculum

The First Reconceptualisation (1986-87)

The need to reconceptualise population education was felt for the first time during the early part of 1980s because of certain specific reasons. Evaluation studies on various facets of the implementation of the National Population Education Project identified significant gaps in the integration of the elements of population education in the content and process of school education. It was realised that the demography-laden conceptual framework, with excessive and not-so-essential elements of population dynamics, had hindered the process of effective integration of its elements into the school curriculum. The need for modification in the conceptual framework was also felt in the background of the recommendations adopted by the International Conference on Population held in Mexico City in 1984, which unfolded new dimensions of population phenomenon.

The initial step in reconceptualising population education was taken at the UNESCO Regional Seminar held in 1984, in which five major themes were identified as the core components of the conceptual framework. Those were: **family size and family welfare, delayed marriage, responsible parenthood, population change and resource development, and population related beliefs and values.** During almost the same period, the Indian Parliament adopted the National Policy on Education 1986 which reflected the magnitude of the major causes and consequences of rapid population growth. Nearly half of the ten core curricular areas identified in the policy document such as **equality of sexes, protection of environment, removal of social barriers, observance of small family norm, and inculcation of scientific temper,** all of them being

critical concerns of population education, provided an appropriate context for its reconceptualisation (Seshadri, 1991).

While revising the conceptual framework of population education in India, six major themes: **family size and family welfare, delayed marriage, responsible parenthood, population change and resource development, population related values and beliefs, and status of women** were identified. The scheme of content was prepared by drawing contents relating to these major themes from the following six areas: ***economic development, social development, environment and resources, family life, health & nutrition, and demographic implications***. The reconceptualised framework changed the demography-laden concept of population education into a value-laden concept and defined it as education in the interrelationships among population, development, resources, environment and quality of life (NCERT, 1987).

Why Reconceptualization Again

The **Programme of Action** adopted by the historic **International Conference on Population and Development (ICPD)** held in Cairo in 1994 necessitated a basic change in the conceptual framework of population education although this need was reflected in the Istanbul Declaration and the ***Plan of Action*** adopted by the **International Conference on Population Education and Development, 1993**, which had brought forth the limitations of the existing concept and recommended the inclusion of a number of emerging concerns in it. In the course of *Population Debate* since Malthus initiated it, population phenomenon has been analyzed in view of perceptions of its interrelationships with other variables of development and social environment.

The present perceptions of the patterns of these interrelationships reflected in the ICPD Programme of Action are based on the latest development of a global consensus on population and development. It is, therefore, an imperative requirement for all planned interventions addressed to population phenomenon to reorient, revitalize and rejuvenate themselves to realise the

vision of the new paradigm of population and development. The ICPD Programme of Action has effected what has been described as a "*Paradigm Shift*" from number to conditions for population stabilization. It is considered essential now to focus on the individual needs instead of demographic targets and to integrate population concerns into development strategies rather than pursuing and providing sustenance to population control approach. Moreover, the ICPD for the first time has explicated two distinct roles of education: (a) education as a key factor in population stabilization; and (b) education as a means to promote greater responsibility and awareness of the interrelationships between population and sustainable development (UNFPA, 1996).

The experiences gained during the implementation of the National Population Education Project in India also favoured the reconceptualisation of population education. The Population Education Framework even after the first reconceptualisation during mid-1980s did not include elements relating to the process of growing up and reproductive behaviour, as these elements had been regarded very sensitive, although education in these elements was considered essential for influencing the fertility behaviour of individuals (Srivastava, 1999). In view of the problems that adolescents have been confronting for lack of authentic knowledge about the process of growing up from childhood to adulthood and the recently realized urgency to impart HIV/AIDS education, it was felt that the Population Education Framework must be revised to incorporate all these elements (NCERT, 1998)

Another significant factor that necessitated the reconceptualisation of population education was the realisation that the Framework of Population Education being primarily influenced by the IEC approach had not been in consonance with the nature of the existing school curriculum framework. Population education tended to adopt a didactic approach to convey messages. But the existing school framework is open-ended and is considered a process during which messages are caught. Population education, therefore, needed to be reconceptualised as a truly educational endeavour that would make the learners aware of all possible dimensions of population - development

interrelationships, promoting a general approach of supporting and empowering learners to take rational decisions regarding population and development issues; and also making them aware of the social consequences of their individual decisions.

Post-ICPD Reconceptualised Framework of Population Education

The reconceptualized framework of population education mirrors all the critical concerns reflected in the ICPD Programme of Action. It provides a broader definition to the concept of population education as an educational process which develops among learners an understanding of interrelationships between population and development, causes and consequences of population change, and the criticality of the essential conditions for population stabilisation. It inculcates in them rational attitude and responsible behaviour, so that they may make informed decisions in respect of population and development issues (NCERT, 1998). Accordingly the objectives of population education are:

- Making learners aware of the interrelationships between population and sustainable development;
- Developing in them an understanding of the criticality of essential conditions of population stabilisation for better quality of life of present and future generations,
- Inculcating in them rational attitude and responsible behaviour towards population and development issues;
- Making them understand the crucial aspects of adolescent reproductive health, focusing on the elements of process of growing up, and implications of HIV/AIDS and drug abuse.
- Inculcating in them rational attitude towards sex and drugs and promoting respect for the opposite sex; and
- Empowering them to take informed decisions on issues of population and development including those of reproductive health

Broad Content Outline :

With a view to attaining these objectives, the Reconceptualised Framework focuses on six major themes and selected contents relating to these themes. These contents belong to the existing subjects being taught at the school stage, such as, Environmental Studies, Social Studies, Economics, Geography, Civics, Political Science, Science, Home Science, Biology, Chemistry, Physical and Health Education, Psychology, Sociology, History and others. The contents have been placed under the six basic themes in the following manner

Theme I : *Population and Sustainable Development*

- A. Population Growth and Structure: Implications for Population Stabilisation :**
Population Growth, Fertility, Mortality, Age and Sex Structure – Implications in terms of the interrelationships between population change and the pace and quality of economic and social development; *Infants, Children, Youth Elderly People and Persons with disabilities* - health, educational and special needs and well-being in the context of population stabilisation.
- B. Population, Sustained Economic Growth and Poverty:** *Integration of population issues in the development strategies-* Interrelationship between eradication of poverty and population stabilisation; Sustainable patterns and levels of resource utilisation, production and consumption
- C. Population and Environment :** *Interrelationship between population, development, natural resources, use of technology and quality of life* Socio-economic dimensions of sustainable development, *Sustainable management of resources*– Unsustainable pattern of consumption and production and their impact on environment; *Environmental Pollution* Impact on health and quality of life, *Use of technology in agriculture, Industry and other aspects of life styles-* Impact on the sustainability of resources and environmental degradation, *Women and environmental issues-* Interrelationships

Theme II : Gender Equality and Equity for Empowerment of Women

- A. Gender Equality and Equity :** Fulfillment of women's potential through health care, education, skill development, ability to earn beyond traditional occupations, employment opportunities outside the household, and making them self-reliant; the role-stereotypes and the social worth of women; discrimination/violence against women.
- B. The Girl Child .** Need for change in the perception of the social worth of the girl child, health care, education; role-stereotypes and discrimination within the family and society.
- C. Male Responsibilities :** Appreciation of the key role of males in bringing about gender equality; Shared parental responsibilities.

Theme III: Adolescent Reproductive Health (Adolescence Education)

- A. Process of Growing Up :** Physical change and development during adolescence, Socio-cultural development; Gender Roles
- B. HIV/AIDS :** Basic information on HIV/AIDS, prevention and control; care for the affected
- C. Drug Abuse :** Causes of drug abuse, drug addiction; drug dependence, effects of drug abuse, prevention and responsibility

Theme IV : Family : Socio-cultural Factors and Quality of Life

- A. Family as Basic Unit of Society :** Importance of institutions of marriage and family; Impact of rapid demographic change and socio-economic development on patterns of family composition and family life.
- B. Socio-Economic Support to the Family :** Basic needs: housing, food, clothes, health, education, social security and work; Need to promote social environment against domestic and sexual violence, Problems of old and handicapped members

Theme V : Health and Education : Key Determinants of Population Change

A. Health, Morbidity and Mortality Interrelationship between health, morbidity and mortality, population change and quality of life.

B. Child Survival : Linkages between child survival and timing, spacing, number of births and reproductive health of mothers.

C. Health of Women and Safe Motherhood : Health of women as a key factor for the quality of life in family and society.

Theme VI : Population Distribution, Urbanization and Migration

A. Population Distribution : Interrelationship among patterns of population distribution, socio-economic development, environment and quality of life

B. Population Growth in Urban Agglomerations : Continued concentration of population in primate cities/mega-cities and economic, social, civic and environmental challenges

C. Migration : Causes of migration, especially related to poverty; Impact of migration on socio-economic development of rural areas.

Strategies of Institutionalisation

The overarching objective of concerted efforts being made under the National Population Education Programme in India has been the institutionalization of population education in the content and process of the education system. Although in some other countries this new educational area was introduced as a separate subject area, the strategy of integrating population education elements in the on-going subject areas of the school curriculum was adopted here.

Integration Strategy

In India population education, therefore, has been accepted as a critical curricular area in the national policy document, and its elements have been

integrated in the selected subjects being taught at different school stages. It has not been treated as a separate subject in the school curriculum. Moreover, attempts have also been made to include a separate paper on population education, over and above integrating its elements in existing papers in the courses prescribed for pre-service elementary and secondary teacher education.

Although the strategy of integration of population education contents in the syllabi and textbooks of different subjects has been considered successful to a large extent, evaluation studies have brought forth the limitations of this approach. It has been found that there are a number of critical contents of population education that are yet to be included in school syllabi and textbooks (NCERT, 1999). Particularly, the new elements of reconceptualised population education do not find any place in the existing school curriculum. The whole range of contents related to adolescent reproductive health, conceptualized as *adolescence education* are absent in the syllabi and the textbooks of school education (Srivastava, 1999). Even the contents which are incorporated, lack the treatment that may ensure the attainment of population education objectives. There may be a number of reasons for the ineffective integration of population education elements in the content and process of school education. The most important of those reasons is the reluctance on the part of the authors of the textbooks to provide the desired treatment to the population education contents as it requires them to look beyond the traditional structures of the concerned subjects. It is evident from the above mentioned contents of population education that almost all of them belong to one or the other of the subjects being taught in schools. A lesson on reproduction system in Biology textbook is expected to incorporate most of the elements of adolescent reproductive health, but the author of the textbook invariably would not include the socio-cultural implications of reproductive behaviour. The same is true of most of the textbooks of other subjects.

It is generally observed that the problems and issues that are included in the researches conducted in a particular discipline are not immediately accepted in the content structure of that discipline. Many inter-disciplinary and trans-

disciplinary problems are probed into by the researchers of a particular discipline but the authors of textbooks of that discipline hesitate to incorporate the insights emanating from such researches into the treatment of the concerned content area. Which is why population education contents, though included in different textbooks, do not receive the kind of treatment which the conceptual framework of population education recommends. Moreover, the traditional strategy of curriculum transaction in classrooms also has not changed. The teaching-learning process of the subject textbooks has not been able to promote innovative participatory and interactive methods that are essential for inculcating rational attitudes and behaviour among the learners.

Because of these reasons, it has been felt for quite some time that the school curriculum needs to be reorganised in a way that may provide an independent place to significant educational areas like population education, adolescence education, environmental education, health education and human rights education. A separate subject area such as *Contemporary India : Emerging Concerns* may be carved out of the time and space available in the existing school curriculum and the above mentioned areas may be included with the unit approach. A reorganization of this kind can conveniently take place at upper primary and secondary stages of school education, where there is an undifferentiated curriculum. It is also not advisable to develop a strictly discipline based curriculum for those school stages that are expected to provide general education.

Co-curricular Approach

Co-curricular activities have always been an integral part of the teaching-learning process. Their significance particularly for an educational area like population education, which aims primarily at influencing attitude and behaviour of the learners, can hardly be over-emphasised. However, for population education co-curricular activities are considered important not only for reinforcing the classroom teaching but also for initiating the teaching-learning process without waiting for a number of its elements to become an integral part of school

syllabi and textbooks. The activities are expected to be organized in schools on such a scale and so frequently that both students and teachers, and in certain cases the parents also, are thoroughly exposed to the new population education contents.

Strategies for Curriculum Transaction

Adoption of appropriate strategies for curriculum transaction is crucial for achievement of the objectives of population education. It is very often presumed that when there is teaching, learning takes place automatically, and that learners learn only because the teacher teaches them. But this is not always true. There can be no learning in spite of teaching, and the learners can learn even without teaching. As a matter of fact whether learning takes place, whether things learnt are retained and whether the learning process leads to desirable attitude formation and behaviour change depend largely on the teacher and the teaching methods.

This is more so for educational areas like population education, the primary focus of which is on the inculcation of positive attitude and the development of responsible behaviour towards population and development issues. The expository method of teaching, the lecture method or 'chalk and talk' method has serious limitations. There is a series of "new" methods known as "participatory" methods which have been considered very effective because of their potential to induce students into taking active part in the teaching-learning process. In this context problem solving/discovery approach and value clarification strategies are found to be more functional.

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CHAPTER – 8

CURRICULUM DEVELOPMENT IN POPULATION EDUCATION

Introduction

The school curriculum of a country, like its Constitution, reflects the ethos of education of that country as its chief concerns. The values enshrined in our Constitution points towards the development of a pluralistic open society and a state which is secular, democratic and socialist in nature. The school curriculum should reflect these aims and values in its structure, content, implied methodology – in fact, in its entire design.

The term "curriculum" is derived from the latin word "currere", which means "run" and its signifies a course which runs to reach a goal. In education, it is generally identified with a course of studies or list of subjects prescribed for a course. In fact a list of subjects forms only a part of the curriculum and not whole of it. A curriculum means the total situation (or all situations) selected and organized by the institution and made available to the teacher to operate and translate the ultimate aim of education into reality. The Secondary Education Commission points out that a curriculum "does not mean only the academic subjects traditionally taught in the school but it includes the totality of experiences that a pupil receives through the manifold activities that go on in the school, in the class room, library, laboratory, workshop, playground and numerous informal contacts between teacher and pupil"

Thus the term curriculum in its broadest sense refers to all the learning activities or experiences provided by an educational programme to a group of learners or target audience. As such it may include objectives, content, learning activities, materials, teaching aids and evaluation means and tools. In its narrow sense, a curriculum may refer solely to the core contents or content outline of a particular programme or field

Curriculum development is the most important component for an educational innovation like Population Education. The introduction of population issues into the school curriculum, the explanation of the inter-relationships between a wide range of social phenomena both at micro and the macro levels, the explicit attention to the preparation of students for their future role as adult decision makers in the families, community and the nation. This innovation can have an impact on curriculum design and instruction and make it possible to assert that population education can become both a stimulus to and a support for wide spread educational reforms.

It is through the curricular materials that the future citizens receive population related messages. It aims at the development of awareness and attitude that will make learners to develop responsible behaviour towards population issues.

Need for Population Education in Schools

The vital problem is that of young people who will constitute the adult population in the coming two to three decades. It is their reproductive behaviour when they become adult which is going to affect considerably the population situation in future. In order to achieve population stabilization, the future parents, who will be most important segment of society, must be involved. Their changed attitude towards family size is vital. Population education through the school system could be a potent instrument for developing these attitude and competencies among this group to take a rational decisions. Different people have different opinion about the introduction of population education at different grade levels. Some of the arguments given for the introduction of population education at the elementary stage are as follows:

- (i) Elementary stage has the highest enrolment. Children dropout as they go up in the educational ladder. Introducing population education at this stage will benefit larger number of children.

- (ii) Elementary school curriculum generally provides flexibility for introducing new concerns. Since there is no public examination at this stage, the chances for the use of experimental materials are more.
- (iii) Change in knowledge and attitude are possible more at this stage as proved by many research studies.
- (iv) Primary school teachers still play an important role in the rural areas. Their exposure to population related issues will help both students and the community in changing their attitude and behaviour in a right direction -

Those who argue for the introduction of population education at the secondary level give the following reasons:

- (i) Students of this stage are in the process of growing up. These are the students who are already or will be taking decisions regarding marriage and reproductive behaviour, so that education in matters related to adolescent reproductive health and other population issues is of immediate relevance.
- (ii) Students of this stage can grasp and understand population issues in greater depth.
- (iii) The number of teachers trained required is comparatively smaller.

It is probably better if population education is introduced at all the stages of school education. Efforts should be made even to reach to those who are not in the schools.

Approaches to Curriculum Development in Population Education

Different types of approaches have been adopted by different countries in Asia for developing curriculum in population education. Mainly two types of approaches are used in most of the countries. One approach is separate subject approach and the other is integration approach.

Separate Subject Approach

In this approach, population education becomes a subject area along with other subjects taught at one or more grade levels. A separate subject affords the greatest possibility of systematic and sustained learning. Some countries have started thinking of introducing population education as a separate subject at the secondary level. For example, Philippines and Thailand are offering it as a separate elective course at secondary level. Although this approach is much effective and the chances of dilution and diffusion is less but could not be put into practice in most of the countries. Population education is multi-disciplinary in nature and draws its content from various subjects. Secondly, school time tables are already over crowded and teacher find difficulty in accommodating a new course. Thirdly, new teachers will be required if it is introduced as a separate course.

Most of the countries have, therefore, used an integration approach to include population education concepts in different school subject areas

Integration Approach

A survey of the sparse literature in the field and discussion with its proponents suggest that separate population education course or a series of courses to be included in elementary and secondary stages is not the most appropriate way to develop the necessary awareness. The curriculum is already crowded, the demand from the traditional disciplines for more time as the boundaries of knowledge are pushed back generally reduced the possibility of adding a new population course. Further children will learn better if they are confronted with population relevant materials both throughout their school curriculum and during their entire period of schooling". Population education is multi disciplinary in nature and related to various subject areas. The National Seminar on Population Education held at Mumbai in 1969 also recommended "Population Education should be introduced into the curriculum of schools and

colleges by including it in so far as it may be possible, in the area of study such as Social Studies, Sciences, Health Education, Mathematics, Languages etc.” In fact this seminar was of the view that it may be possible to achieve all the objectives in view by including population education suitably in the curriculum of appropriate subjects already comprising the curriculum.

Integration of population education in school subjects can be possible in two ways: i) Unit Approach In this, new units relating to population education are developed and added to the existing units in the course/syllabus of the subject area. This type of approach is adopted in countries like Philippines, the Republic of Korea and Thailand. The subject usually chosen for the inclusion of population education units are Social Sciences, General Sciences, Biology, Mathematics, Home Economics, Health and Physical Education; (ii) Infusion Approach This approach implies inclusion of population education concepts and data into the normal process of instruction throughout the curriculum without having to develop separate course of new units. Inclusion of this type involves enriching and expanding the existing unit in the syllabi of the accommodating subject areas to include population education related ideas. In this approach examples can be substituted into the already existing materials by population related examples. Through the substitution of examples, education content remains the same, only the substance of the example changes. This infusion was done either by incorporating in the textbooks or by publishing them in teachers' guides. In other words, infusion with existing subject of population education concept means that no major curriculum reorganization is necessary. Time table need not be disturbed and existing teachers can teach with a very little training

This approach has also some demerits In this approach, there is danger of fragmentation of the content and the consequent failure of the pupil to attain the kind of understanding that the programme requires It is much easier to see integration on paper than to achieve it in reality of the school situation. It has been observed that population education concepts tend to be lost in the process of integration and the whole purpose of population education gets diffused.

In India, efforts have been made to develop and integrate a few lessons as well as to infuse ideas in the syllabi and textbooks of various subject areas at different school stages.

National Curriculum Framework

The project activities created an ambience that informed the National Curriculum Framework Documents developed by NCERT as a follow up of the National Policy on Education 1986. *National Curriculum Framework for Elementary and Secondary Education: A Framework* brought out in 1988 reflected the concerns of population education in its various sections and particularly in the section on *General Objectives of Education* (pp. 15-16). There were at least the following two objectives stipulated in the document that directly reflected the objectives of population education

- “School curriculum should...help promote in the learner the development of .
- .. A proper understanding about the role and importance of sex in human life and healthy attitude towards sex and members of opposite sex,
- . Appreciation of various consequences of large families and over population and need of checking population growth.”

The *National Curriculum Framework for School Education* developed by NCERT in 2000 reflects population education still more comprehensively. It incorporates various components of population education, adolescence education, AIDS education, life skills education, environment education and gender equality in different sections. This document also stipulates two specific population education objectives in its component on *General Objectives of Education*.

- “..Appreciation of various consequences of large families and over population and need of checking population growth.”
- “ Cultivating proper understanding of and attitude toward healthy sex related issues and respectful attitude toward members of the opposite sex ”

Syllabi and Textbooks

The elements have been integrated in the related subjects that have been part of school curriculum since long. According to a content analysis done in 1998, there were 124 lessons, integrating contents of population education in the NCERT textbooks of classes III to XII. The stage-wise subjects for *Primary and Upper Primary Stages* are Languages, Environmental Studies, Science and Social Sciences; for *Secondary Stage* are Languages, Science, Social Sciences (Geography, Economics, Civics), Health and Physical Education, and for *Higher Secondary Stage* are Languages, Science (Biology, Chemistry), Social Sciences (Geography, Economics, Sociology, Political Science, Psychology, Commerce) and Health and Physical Education. In teacher education courses, population education has been integrated both as a separate topic in existing papers or as a separate paper, in most cases as an optional paper.

POPULATION EDUCATION CONCEPTUALIZATION

- Historical Perspective

The concept of Population Education has relatively a short history. Ever since its inception, it has been changing and evolving at relatively faster pace. This has been so primarily because its central subject – the population phenomenon – has been unfolding itself in quick succession and identifying new dimensions of its interrelationships with other facets of human development. Alva Myrdal was perhaps the first to voice for the need of education in respect to the then population situation of western societies in 1941. Later in 1960, the noted teacher educators like Professor Sloan R. Wayland Warren S. Thompson and Philip M. Hauser conceptualized it as an education for making students aware of the demographic concerns focused on population growth.

In India also, Population Education was first conceptualized during the later half of 1960. The National Seminar on Population Education held in 1969 defined it as an education to make learner aware of the causes and effects of

population changes. Initially Population Education emerged as a demographic-laden concept. But with the passage of time, it was realized that it should be oriented toward values and therefore a need was felt to reconceptualize it.

The first reconceptualization occurred during late 1980s, when the Population Education Conceptual Framework focused on six major themes Family size and Family Welfare; Delayed Marriage; Responsible Parenthood, Population Change and Resource Development; Population Related Values and Beliefs and Status of Women. The content focusing on these themes were drawn from the following six major areas.

1. Population and Economic Development
2. Population and Social Development
- 3 Population and Family Life
- 4 Population Health and Nutrition
5. Population and Environmental Resources
- 6 Population Dynamics.

By early 1990 again a need was felt to reconceptualize Population education The feedback received through in-built monitoring and findings of evaluation studies identified two basic limitations These were

- 1 Population Education Framework did not provide comprehensive treatment to the unfolding dimensions of interrelationships between population and development, and
- 2 Its theoretical framework was not in tune with the existing National Framework of School Education in India

The Core Curricular areas reflected in the National Policy on Education (NPE), 1986, such as Observance of small family norm, equality of sexes, protection of environment, removal of social barriers and inculcation of scientific

temper were also reflected. The basic change in the perception of population development inter-relationship reflected in the ICPD, 1994 Programme of Action registered a Paradigm Shift and put forth a fresh population agenda for the nations. The experiences gained during the implementation of NPEP in India also highlighted the gap regarding some crucial areas concerning sex related matters, HIV/AIDS and Drug Abuse.

In view of the above the existing framework of population education was reconceptualized highlighting the following:

1. The focus of population education will shift from number to essential conditions for population stabilization. These conditions are Gender Equity and Equality, Reproductive Health and Reproductive Rights; Family – Its Structure and Role, Sustainable Development and so on. It highlights the individual needs instead of demographic targets and reflect the shift from purely population control to broader sustainable development approach.
- 2 It highlights education as an essential condition for population stabilization.
3. The New framework incorporates the elements of *Adolescence Education* (Process of Growing up, HIV/AIDS and Drug Abuse) as one of its major components
- 4 Population Education is conceptualized as a truly educational approach.
- 5 The Policy directions of Revised NPE 1992 are also reflected in the Reconceptualised Framework of Population Education

Definition of Population Education

UNESCO Regional Office for Education in Asia in 1970 defined Population Education "as an educational programme which provides for a study of the population situation in the family, the community, nation and the world with the purpose of developing in the students rational and responsible attitude and

behaviour toward that situation. In view of the ICPD Programme of Action, in the Reconceptualized Framework of Population Education, it has been defined "as an educational process to develop in learners an understanding of inter-relationships between population and development, causes and consequences of population change and the criticality of the conditions for population stabilization. It inculcates among them rational attitude and responsible behaviour towards population and development issues, so that they may make informed decisions"

Objectives of Population Education

The process of curriculum development should take into consideration the following objective of population education. Population Education aims at .

- Making learners aware of the inter-relationships between population and sustainable development
- Developing in them an understanding of the criticality of essential conditions of population stabilization for better quality of life of present and future generations
- Inculcating in them rational attitude and responsible behaviour towards population and development issues
- Making them understand the crucial aspects of adolescent reproductive health, focusing on the elements of process of growing up, and implication of HIV/AIDS and Drug Abuse
- Inculcating in them rational attitude towards sex and drugs and promoting respect for the opposite sex; and
- Empowering them to take informed decisions on issues of population and development including reproductive health

Identification of Population Education Contents

Population Education is a value-laden concept. Its content is culture and region bound and of inter-disciplinary in nature. The desirability of having need-based as well as a demand based curriculum calls for a serious exercise in respect of selecting appropriate and relevant contents. The Reconceptualized Framework of Population Education has been built around the following six major themes. These are:

- 1 Population and Sustainable Development
- 2 Gender Equality and Empowerment of Women
- 3 Adolescents Reproductive Health (Adolescence Education)
- 4 Family Socio-Economic Factors and Quality of Life
- 5 Health and Education – Key Determinant of Population change
- 6 Population Distribution Urbanization and Migration

The broad contents theme-wise and stage-wise have been identified. These are given below in a tabular form. Subjects for integration have also been mentioned

BROAD CONTENTS OF POPULATION EDUCATION

| Themes | Broad Content Areas | School Stages | Subjects |
|-------------------------------------------------|------------------------------------------------------------------|----------------------------|----------------------------------------------------------------------|
| 1 | 2 | 3 | 4 |
| POPULATION & SUSTAINABLE DEVELOPMENT | Population situation - implications for population stabilization | Upper Primary Secondary | Social Sciences Co-Curricular Activities |
| | Population & sustained economic growth, population & poverty | Secondary Hr.Secondary | S.Sciences Economics, Geography, Pol. Science, Sociology |

| 1 | 2 | 3 | 4 |
|---------------------------------------------|------------------------------------------------------------------------------------|----------------------------------|------------------------------------------------------------------------------------|
| | Consumption & utilization of resources, avoidance | Primary Upper Primary | EVS/Social Science |
| | Sustainable patterns and levels of resource utilization production and consumption | Secondary Hr. Secondary | S. Sciences/ Sociology/ Economics/ Geography |
| | Population resource and technology | Secondary Hr. Secondary | S. Sciences/ Economics Geography Sociology |
| | Population, Environment and Development | Secondary Hr. Secondary | Science & Technology, S.Sciences Economics Geography Sociology |
| GENDER EQUALITY & EQUITY FOR WOMEN | The girl child, equal treatment of boys and girls; | Primary | Languages Environmental Studies |
| | Elimination of discrimination between boy and girl and man and woman | Upper Primary | Languages S.Sciences Co-curricular Activities |
| | Equity and Equality between man and woman in different aspects of life | Secondary Higher Secondary | Languages S.Sciences Sociology Pol.Science Co-curricular Activities |
| | Promoting the fulfillment of women's potential | Secondary Higher Secondary | Languages S. Sciences Sociology Pol.Science |

| 1 | 2 | 3 | 4 |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------|
| | Empowerment of women | Secondary Higher Secondary | Languages S. Sciences Sociology Pol.Science Co-Curricular Activities |
| | Participation of women in all aspects of life | Secondary Higher Secondary | Languages S. Sciences Sociology Pol.Science |
| | Reproductive health and reproduction right | Secondary Hr. Secondary | Sciences & Technology Biology |
| | Male responsibility in all areas of family and household activities | Secondary Higher Secondary | S. Sciences Sociology Co-curricular Activities |
| ADOLESCENTS REPRODUCTIVE HEALTH | Physical growth in human body, genital hygiene | Primary | Environmental Studies |
| | Physical, & emotional changes during adolescence, inter-personal relationships sexual health and hygiene, myths and misconception | Upper Primary | Science & Tech. S.Sciences Co-curricular Activities |
| | Physical, physiological and psychological development during adolescence Interpersonal relationships between adolescents and members of the opposite sex parents, peer group and gender roles. | Secondary Higher Secondary | Biology Psychology Health and Physical Edu Co-curricular Activities |

| 1 | 2 | 3 | 4 |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| | Meaning of HIV/AIDS, modes of transmission ways through which HIV is not transmitted, ways of preventing HIV transmission | Upper Primary Secondary Higher Secondary | Science Biology Social Sciences Health and Physical Education/ Co-curricular Activities |
| | Drug abuse, and its implication, prevention & rehabilitation of drug abuse, myths and misconceptions | Secondary Higher Secondary | Science, Biology Social Sciences Sociology Co-curricular Activities |
| FAMILY, SOCIO-ECONOMIC FACTORS & QUALITY OF LIFE | Family as a basic unit of Society, Family and basic needs of family members, shared roles and responsibilities of the members in the family | Upper Primary | Languages Environmental Studies Co-curricular Activities |
| | Marriage and Family, Socio-economic development and their impact on patterns of family composition | Upper Primary Secondary Hr. Secondary | Lang., S.Sc. Social Sc. Co-curricular Activities |
| | Shared roles and responsibilities of the members particularly the participation of women in decision making | Secondary Higher Secondary | S.Sc., Pol.Sc., Sociology Co-curricular Activities |
| | Elimination of discrimination against girl child, elimination of all types of violence against girls and women; and | Upper Primary Secondary Hr. Secondary | Lang., S.Sc. Pol. Science Sociology Co-curricular Activities |
| | Equal opportunities for members for education, employment, responsible parenthood. | Upper Primary Secondary Higher Secondary | Lang., S.Sc. Pol. Science Sociology Co-curri. Act. |

| 1 | 2 | 3 | 4 |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------|
| HEALTH & EDUCATION - KEY DETERMINANTS OF POPULATION CHANGE | Primary health care, cleanliness of surrounding, safe drinking water, importance of immunization | Primary Upper Primary | Environ.Studies Sc. & Tech. Languages The Art of Healthy & Productive Living |
| | Child survival, spacing, reproductive health of mother, male & female child care | Secondary Higher Secondary | Science & Technology |
| | Health of women and safe motherhood improvement on nutritional status especially of pregnant and lactating mother | Secondary Higher Secondary | Science & Technology Biology Sociology |
| POPULATION DISTRIBUTION URBANIZATION AND MIGRATION | Population distribution | Secondary Higher Secondary | Social Sciences Economics Geography Sociology |
| | Population growth in urban areas and socio-economic civic and environmental | Secondary Higher Secondary | Economics Geography Sociology |
| | Problems of urban Agglomeration | Secondary Higher Secondary | Economics Geography Sociology |
| | Need for sustainable regional development strategies | Secondary Higher Secondary | Sociology Geography Sociology |
| | Migration – Causes and impact | Secondary Higher Secondary | Sociology Geography Sociology |

Curriculum Transaction

The changes reflected in the Conceptual Framework of Population Education will require identification and adoption of strategies of curriculum transaction. The strategy of integration of population education contents into the syllabi and textbooks of selected subjects at the school level has been adopted. The textbooks are considered effective instruments for exposing students to population education ideas and messages that are essential for making their understanding of population phenomena better. In this context the following strategies may be useful:

- (i) Attempt has to be made to include only those content that could receive comprehensive and effective treatment in the syllabi and textbooks of concerned subjects only. Those natural entry points be selected that have potentiality of providing comprehensive treatment to relevant population education contents. The most crucial aspect of effective integration would be to integrate maximum contents at minimum entry points in most comprehensive way. Only those subjects should be given priority that have greater potentiality to incorporate these contents.
- (ii) Some contents of population education may not find suitable entry into the existing syllabi and textbooks because of the limitation of the subject areas. For such contents supplementary reading materials and audio-visual materials may be developed. Classroom teaching needs to be supplemented by a variety of co-curricular activities such as project assignments, play way activities, demonstration, group discussion, painting, essay writing, debate, elocution, question box, quiz competition, etc.
- (iii) Any curriculum remains a futile exercise unless it is put into practice. Teacher occupies an important place in the implementation of this area. It is the teacher who has to use the material, create learning situations in the classroom for his students and help them to learn. His orientation to the new curriculum is, therefore, absolutely essential. Both in-service and

pre-service orientation should be organized. The teacher should be fed with suitable instructional materials like teacher's guide, handbooks with update information and audio-visual materials. Population education taught by an imaginative teacher could enable students to develop creative thinking and take action in relation to a number of problems and issues that surround them. Problem solving/discovery approach and value clarification approaches are regarded to be more functional.

- (iv) The population education contents integrated in different subject areas and other materials developed for promoting effective integration, teacher training organized and activities conducted in schools should be evaluated to find out whether the desired outcomes in terms of awareness and attitude have been achieved. Being value-laden, continuous and comprehensive evaluation should be undertaken so that necessary improvements are made in the curriculum and materials and its transaction

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CHAPTER - 9

TEACHER TRAINING IN POPULATION EDUCATION

Teacher's quality is in turn a function of teacher's mastery of subject matter, use of appropriate teaching skills and positive professional attitude. At the early stage of educational expansion, it was assumed that such knowledge skills and attitudes were developed during general education. There is now however, evidences for the importance of professional teacher education, both pre-service and in-service.

In population education teacher training plays a very crucial role particularly when it is not a separate subject rather its content are integrated into different subject syllabi and textbooks. The quality and effectiveness of teacher training, therefore, is central to the quality of curriculum transaction in population education.

Population education being a value-laden area, it is more demanding on teachers. It is not just a question of mastery of new content, but also of new values, attitudes and behaviour. Population education has been introduced with the objective to help the learners to understand the interrelationships of population and development and other factors of quality of life and to make informed and rational decisions with regards to population related behaviour with the purpose of improving the quality of life of individual, family, community, nation and the world. Over the period of time, several important developments have taken place in population education. New contents have been incorporated into it, such as responsible parenthood, adolescents' reproductive health, prevention of HIV/AIDS, family its roles and responsibilities, gender equity and equality, and sustainable development. A number of basic concepts having universal applicability form a part of the content of population education. First concept is the importance of having respect of others especially persons of the opposite sex. If children can truly learn and understand what respect means and can hold it as a value then they will refrain from behaviour which is potentially harmful to

others. The second important concept is that of self-respect and self-esteem. This is pertinent to both boys and girls, it is particularly important for girls. They should be given more opportunities of education, employment etc. The third important concept is that the children and young people should learn to understand that it is possible to plan the family size. The fourth to convey is that behaviour has consequences. If adolescents behave irresponsibly, for example, in the area of reproductive behaviour, they should understand that the consequences have life long implications. And finally children need to learn how to withstand and recognize the social pressure coming from peers, parents, relatives and help to deal with them in a responsible manner. Education of this type is complex and, therefore, largely depends on a thorough preparation of teachers. They need to be oriented into the content of population education, to be exposed to the techniques and skills of using the instructional materials in the classroom so that they are able to develop proper understanding of population related issues among themselves and in turn in the students.

Teacher Training needs to be focused on the following three things:

- I Planning
- II. Implementation
- III. Evaluation

I. Planning

The success of any training programme depends to a considerable extent on efficient planning. For proper planning the following things need to be taken into account:

1. Training for whom?

The most important aspect is to identify the target group/groups who should be trained in population education. The different personnel who are involved in the implementation of various aspects of the programme would require training/orientation. The target groups can be classified as follows:

- i) Target-group need Orientation
This group includes administrators such as head of the institutions/schools, education officers, supervisors etc.
- ii) Target-group need Training
Project personnel, curriculum developers, textbook writers, teacher educators, key/resource persons, and teachers.
- iii) Target-group need Advocacy
Policy Makers, Educational Administrators, Educational Officers, Media persons, Non-Governmental Organizations, Parents and Opinion Leaders. Advocacy is generally organized to create an enabling environment for a new programme or for an area, which is sensitive in nature.

2. Identifying Training Needs

After identifying the target group or groups that need training, their training/orientation needs should be determined. The identification of training needs of different target groups is important in order to plan a need based training programme. Time, money, efforts and other resources could be put to the best possible use only if the training is based on their needs that are clearly identified. Below are given some factors which could be considered in identifying training needs:

Base-line Information of the Target Group

To make the training need-based, steps should be taken to acquire information about the

- a) profile of the target group in terms of background
- b) current level of awareness/knowledge, attitude with reference to the reconceptualized framework of population education
- c) knowledge and skills related to population education in which the target group need training

- d) local cultural and social norms, values and attitude particularly on the sensitive areas of population education.
- e) the environment, urban or rural in which target group will implement the activities

Training needs could be identified through.

- a) administering questionnaire to trainees before the actual training
- b) base-line surveys available
- c) interview, etc.

3. Training Objectives

The next important issue is to define training objectives for the category of personnel to be oriented/trained or advocacy is organized. Objectives are basically statements that define a programme's tasks, targets and desired outcomes. The exact determination of a programme's objectives is a precondition to any subsequent plan of action. The objectives should be based on the identified training needs which will also help in determine the content and methods of training.

4. Coverage in terms of number of persons to be trained

The orientation of administrators and key/resource persons does not pose any serious problem, but the problem gets complicated when it comes to decide the number of teachers. This question is bothering since the inception of the project whether all teachers of all subjects of all grades or selected number of teachers of selected subjects and of selected grades. The decision as to the number of teachers who should be trained will depend on many factors like the status of integration of population education in various subjects, availability of resources etc.

5. Time Frame for Completing Training Programmes

The funding of Population Education Programme is provided for a specified period of time by the funding agency – UNFPA, for completing all aspects of the programme including training. Population education focus also changes from time to time, there should be a minimum of time lag between training of teachers and implementation in schools, otherwise the trained personnel would relapse into illiteracy so far population education is concerned. The teacher trained in the first year, if not oriented again, relapsed into a stage of untrained teachers in population education. The training programmes has thus to be designed in a way that training in population education can be provided to the maximum number of teachers within the specified time-frame

6. Available Resources

The training programme has to be decided in the light of the human, physical and financial resources available. Along with the financial support for population education programme being provided by the external agency the States should have their own resources for designing the training programmes

7. Coordination among different departments

Because the training at different levels demands interdependence within and between institutions, the effectiveness of any training model will depend upon to some extent on proper coordination and support of various sectors of the educational system. The coordination also became important in view of the availability of limited resources and covering of large number of target groups. Many of the related departments organize their own training programmes for teachers and other personnel which some time overlaps. It is, therefore, essential that a workable mechanism of coordination among different agencies involved in training of different kinds of personnel should be worked out. For example during this phase

efforts at the national level have been initiated by jointly organizing Training Programme for the Project Personnel of three education sectors, namely, Directorate of Adult Education, University Education and School Education.

8. Duration of Training

Duration of the training programme influences the effectiveness of the training. Duration will depend on the category of personnel to be trained, nature of the programme, (whether orientation/advocacy or fresh training) availability of resources, number to be covered and many such issues. For example, advocacy in Adolescence Education for policy makers, administrators require one or two days, whereas training of teachers in reconceptualised framework of population education or in Adolescence Education would require an intensive training of five to seven day duration.

9. Types of Training

Training in Population Education is of two types:

- i) Pre-Service Teacher Training; and
- ii) In-service Teacher Training

Population Education has been incorporated into the pre-service teacher education courses of elementary and secondary levels. Training programmes needs to be organized for the staff of these institutions to enhance their capabilities for integrating population education in the classroom delivery. For In-service Teacher Training both independent and integrated approach can be used to train various categories of teachers and teacher educators.

10. Modalities of Training

The training activities at national and state levels have been conducted under the project by adopting two broad modalities –

- i) Independent; and ii) Integrated.

i) **Independent**

Independent training programmes exclusively for population education have been organized at national and state levels. At the national level these programmes have been of seven to ten-day duration. Some orientation programmes have also been organized for only three-day duration. At the state level, training programmes for teachers and teacher educators have been of two to three day duration and for key and resource persons for three to five day duration. In States more than one tier strategy has been adopted for training of teachers. These training programmes have been of three different categories – (a) Single-period, (b) Multi-period, and (c) School-complex/school based.

(a) **Single-period**

This training modality has been adopted by one State that organizes programmes for specific group of teachers of the entire State within single-period. A large number of teachers are trained at different centres within the fixed time-frame. The most striking feature of this modality is that educational infrastructure of the entire State along with the relevant agencies involved in developmental, environmental, health and family welfare programmes are associated with the training programmes at the lower levels. The Panchayati Raj institution and members of local communities are also involved and media is widely used throughout the State.

(b) **Multi-period**

This modality has been adopted by most of the States. They organize training programmes for different categories of teachers throughout the year at multiple points of time.

(c) School-Complex/School based

This modality has been adopted on an experimental basis by some States. The Population Education Cell organizes training programmes for Principals/Headmasters of selected schools and they in turn orient the teachers of the school complex or of the particular schools.

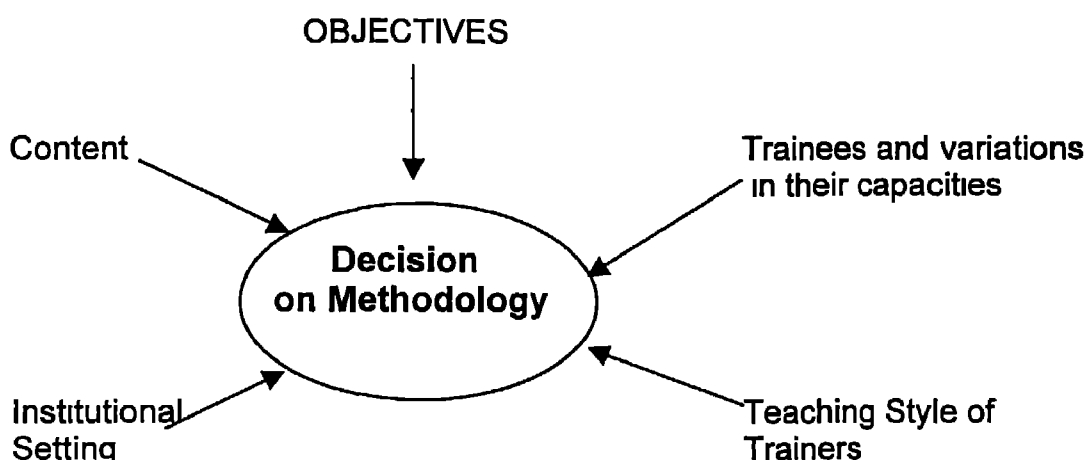
ii) Integrated

This training modality has been adopted more regularly during the second cycle of the National Population Education Project. Under this modality efforts have been made to make the training in population education an integral part of the on-going teacher training programme. It is being done in two ways: (a) Teacher Training Programmes Based, and (b) Teacher Training Institution. By Teacher Training Programmes Based means that any training programme organized by SCERT or SIE should have a component of population education. Teacher Training Institution Based means other related institutions other than those implementing the Project should also incorporate the components of population education in their on-going programmes.

11. Training Strategies

Before the trainees actually arrive at the training centre, it is imperative that the training strategies have been fully worked out. In particular, one should consider whether the training which is being organized is pre-service or in-service. It is equally necessary to consider the levels at which the training takes place – national, regional or local levels as this will influence the choice of training modalities and the duration and timing of training. The way adults learn also varies quite a lot. Trainers should also take into consideration the institutional setting in deciding what methodology to employ. Thus, in deciding which

methodology/methodologies to use, one can consider several factors as shown in the diagram below:



A range of modalities are given below for training the teachers in population education and it is upto the state to select a modality or a combination of modalities for effective training.

i) **Face-to-Face Training**

In this mode, training is given face-to-face either independently or in an integrated way. Under independent category, the training programmes are organized for varied duration exclusively in population education, whereas under the integrated category, the training programmes are dovetailed to the existing teacher training programmes. Under this modality, if training is organized for different levels of functionaries in the descending order of hierarchy and, therefore, is also called hierarchical Face-to-Face training. Different strategies such as one tier or more than one tier are used for training the teacher educators and teachers. In India, this modality is used more commonly for training the teachers in population education. Under integrated face-to-face training, population education is made an integral part of the on-

going teacher training programme, being organized by any other institution.

ii) **Peer Group**

In this modality, the principals or subject heads or coordinators in each secondary school are trained through face-to-face modality and they, in turn, are given the responsibility for training teachers in their own schools. Peer training also involves a pattern wherein the trainer and trainees are both teachers at the same level. Each school is provided training material and it prepare its own schedule of training the teachers. Under this modality, supervisory team also visits the school and provides on-the-spot assistance, guidance as well as evaluation of the programme.

iii) **Mobile Training**

In this modality, a mobile team consisting of trained, competent and experienced trainers conduct teacher training programme in schools. These teams are equipped with a variety of instructional materials, teaching aids, and equipments. The team member can be rotated during the course of the training Thus, minimizing the absence of members from respective posts for a long period.

iv) **Module or Self-Learning Model**

In this modality, the training material/modules are prepared at a central place and are provided to teachers for independent and direct training. Being self-contained learning package, modular learning requires minimum supervision, easy to administer and require the trainee to manage his or her own learning. The crucial need in using the modular approach is to ensure teacher's motivation. It can be supplemented with peer group training modality

v) Training via Correspondence

Under this modality lessons and other learning materials are sent to the trainees through postal service. A correspondence phase is supplemented with some kind of face-to-face training sessions at the local level either by the peer training or by the head of the institution.

vi) Training through Radio and Television

In this model specific educational/instructional programmes are developed for radio/television transmission. These programmes are transmitted regularly at predetermined schedules, indicating time and date. The schools are provided through radio and TV programmes and teachers are expected to listen/view the programme. This model can be supplemented with a peer training model and modular training model.

There are also other modalities like field base preparation, team work inviting teachers in workshops and seminars. During such activities teachers are exposed to population education.

It is evident that the modalities of training teachers vary in terms of approach, tasks and subtasks, supportive services, teaching learning instruments, managerial efforts, cost and coverage of target group and expected intensity of learning. A survey of literature reveals that countries are using one or a combination of more than one modalities for training teachers in population education. In some case under one modality, different strategies are adopted. For example, under face-to-face training modality in India, strategies like independent training, integrated training, massive orientation, tier system, etc. are used.

12. Teaching Strategies

The choice of a particular method/methods is crucial for successful training. Methods used and the training should be close to the field

situations as well as provide to the trainees with new and demanding experiences for their new responsibilities.

In itself no particular training method is superior to all other possible methods. The desirability of a particular training method or a combination of methods is a question to be determined in relation to a number of factors:

- i) Specific training objectives.
- ii) The situation in which training is to take place.
- iii) The role trainees are expected to play in the training process.
- iv) The extent of support available in terms of learning materials; and
- v) The level of familiarity and mastery of various methods on the part of trainers. A description of various teaching methods is given below in brief:

a) Lecture Method

In this method, the trainer does most of the talking with very little participation from the trainees. It may be supported by the use of teaching aids. This method is suitable when there is a large number of audience. Trainer through this method can present a large amount of information in a shorter time. But this method provides limited participation and stimulation to the trainees.

b) Group Discussion

Under this method, there is free exchange of knowledge, ideas and opinions among trainer and trainees. It is less formal than lectures and trainees usually do more talking than the trainers. It can be used to examine issues in depth, explore alternative opinions and develop communication skills. Active role of trainers enhances improvement of knowledge, changing attitude and forming opinions. But this method is more time consuming and chances of deviating from the subject matter are also more.

c) Role Play

Trainer along with trainees enact the role of a certain person in a particular situation. The whole situation is described and played as realistically as possible. It is used to practice real life situations. Role play helps the learner to develop confidence to trainees when faced with the real situation. Due to high involvement, it is useful in strengthening the skills of human interaction and in strengthening the skills of planning, decision making and thinking. However, role playing require special skill, experience, proper guidance and time

d) Case Study

Under this method, a short description of a situation is given. Questions are given to direct the trainees to come up with possible solutions. Proposed solutions are discussed. The benefit of this method is that trainers participate actively. It helps in developing problem solving skill, but this method is time consuming.

e) Assignments

Commonly called 'homework', assignments include reading, writing, viewing, or listening tasks given to trainees as conditioning for a topic to be presented or as a follow-up to a presentation: Trainers are expected to review the assignments and to give trainees feedback where possible.

f) Audience reaction team

An audience reaction team generally consists of two to five trainees who react to a trainer's presentation. Members of the team are expected to interrupt the trainer to seek immediate clarification of points that are not clear, and otherwise help the trainer to meet the specific needs of the trainees.

g) **Brainstorming**

Brainstorming is a technique where creative thinking is more important than practical thinking. The format is to have trainees spontaneously present ideas on the topic without regard to how practical the ideas might be, to jot down the ideas on the blackboard, and then to edit the list. An atmosphere must be created which will cause the trainees to be uninhibited

h) **Buzz Sessions**

The buzz session is a method involving all members of a training group directly in the discussion process. The group is divided into very small group (3 members) for a limited time (about 5 minutes) for discussion to which each trainee contributes his ideas.

i) **Critical Incidents**

Critical incidents are contrived educational experiences in written, audio and/or visual which stimulate real life events. They generally require to make decisions and perform acts in a "laboratory" setting moments in behavioural situations. The technique is used, to teach supervisors how to handle workers, interviewers and how to obtain information.

j) **Demonstration**

The demonstration is a presentation to show how to use a procedure or to perform an act. It is often the trainee carrying out the activity under the supervision/trainer. It is basically a visual presentation accompanies discussion where psychomotor skills are taught.

k) **Field trip or tour**

These are purposefully arranged which a training group visits a place of educational interest, direct observation and study. Field trips usually involve less than four hours while

tours include visits to many points of interest and require from one day to several weeks to complete.

l) **Forum**

A forum is an assemblage of trainees used to facilitate discussion after a topic has been introduced by a speaker, panel, film, or other technique. A moderator is used so that everyone has a chance to voice his views in an orderly manner.

m) **Interview**

An interview is a presentation in which one or more resource persons respond to questioning by one or more trainees (interviewers). It is used to explore a topic in depth where a formal presentation is not desired by either trainees or resource persons

n) **Listening Team**

A listening team listens, takes notes, questions and/or summarizes a training session. The team is used to provide interaction between a speaker and the trainees and is especially useful where the speaker is not especially knowledgeable about an agency's unique problem.

o) **Panel**

panel is a dialogue between a group of four to eight experts on an assigned topic in front of a training group. A moderator ensures that order is maintained, that each resource person gets equal time, and that the topic is covered in depth.

p) **Programmed Instruction**

Programmed instruction is a method of teaching, in a self-instruction format, using print and/or non-print materials as the training medium. Examples are programmed textbooks,

teaching machines, computer assisted instruction, dial access information retrieval system, and other devices.

q) Question Period

The question period is an organized follow-up session to a lecture or speech in which trainees ask questions than the speaker. It is during this time that trainees ask for clarification of points made in the formal presentation, and take the opportunity to ask for information, which was not covered by the speaker but which is of interest to them.

r) Seminar

A Seminar consists of a recognized expert leading a discussion among a group of trainees engaged in specialized study. The leader generally opens a seminar with a brief presentation, often covering provocative issues, and then guides a discussion in which all trainees participate.

s) Simulation

Simulations are contrived educational experiences, in audiovisual or model form, which have the characteristics of a real life situation. Simulations allow the trainee to make decisions or take action in a 'laboratory' setting prior to interacting with people and things

t) Skit

A skit is a brief, rehearsed dramatic presentation involving two or more trainees. Working from a prepared script, the trainees act out an event or incident, which dramatizes a situation taken from on-the-job experiences.

u) Symposium

The symposium is a series of prepared lectures given by two to five resource persons, each speaker presents one aspect

of the topic. The presentations should be brief to the point, and generally not exceed 15 to 20 minutes.

v) Workshop

The workshop is a training method, which permits extensive study of a specific topic. It usually gathers 15 to 30 people who meet together to improve their proficiency, collectively develop new operating procedures, or to solve problems.

13. Development of Prototype Training Material

Once the objectives and framework of the programme have been determined, the need of prototype material arises. This prototype training material should

- i) cover the core content of the reconceptualized framework of population education. Six broad themes identified in the context of Post-ICPD should be elaborated as per the learning needs and expected future tasks of the trainees
- ii) be accurate and up-to-date
- iii) provide scope for interaction with the immediate social-cultural environment
- iv) encourage interest and involvement of the trainees
- v) include activities which help in the acquisition of skills related to population issues

This material can be in the form of a self-learning material, training package, etc. Before being widely used, it should be tried out.

14. Designing of Training Programme

A training programme reflecting the objectives, content areas to be covered be prepared. It should be as per availability of time and resources. Appropriate learning activities (group work) and field visits

should be reflected in the Training Programme in the light of the objectives to be covered. At the same time, some flexibility to include any changes should be there in the training programme design.

II. Implementation Stage

An effort should be made as far as possible to follow the training design that is decided upon. A favourable social climate should be provided during the training so that both trainers and trainees feel free to interact and express their point of view. Such a climate would help in to generate an eagerness to pursue learning. Satisfaction during the programme about various aspects lead to better achievement. Steps may be taken to get continuous feed back from the participants for improvement.

III. Evaluation and Follow-up

1. Evaluation

Evaluation of training programme is an integral part of the process of training. It must develop information about both trainees and trainers, about what the trainees are able to learn during training and how training affects their subsequent performance. Evaluation of training, therefore, is basically conducted to assess the planning, implementation and outcome of training with a view to improving it. It is used to determine the success or failure of the objectives set for the programme, particularly the effectiveness of the training programme. Thus, evaluation will be participatory in nature and emerge from the desire of the trainees and trainers to know their respective achievements as related to the methods employed, objectives set and their own capabilities.

Evaluation of training actually starts before the training programme, during the training and after the training including the follow-up. Thus, it can be divided into three stages : I) Pre-training evaluation or context

evaluation; ii) In-training or process evaluation also called formative evaluation; and iii) Post-training evaluation or product evaluation, also called summative evaluation.

i) **Pre-Training Evaluation**

Pre-training evaluation includes gathering baseline data of the knowledge, attitude and skills of the future trainees, an analysis of their training needs and of the organizational requirements of the training programmes including strategies, learning activities and the management. Pre-training evaluation provides basis for designing of a training programme.

ii) **In-service Training Evaluation**

This is the process of assessing the training programme itself as it progresses. Some basic questions which should be answered are:

- a) Is the programme being implemented as planned?
- b) What improvements should be made to attain the objectives?

The purpose of this evaluation is to decide what changes in the programme are necessary. These changes may take the form of additional learning activities, more participatory sessions etc. There are three basic dimensions in relation to which the effectiveness of the training may be assessed

- The knowledge and understanding that the trainees acquire
- The attitude, opinions and reactions they show.
- Skills they acquire during the training.

Evaluation during the training programme can be done through short tests, informal talks with the trainees to get their opinions, observation of trainees. The purpose of this evaluation is to identify the problems of the trainees in terms of learning the content, changing or reinforcing

attitude, demonstrating expected behaviour and providing feedback for improvements.

iii) **Post-Training Evaluation**

At the end of the training programme some basic questions which should be answered are:

- a) Have the training objective been achieved?
- b) Has the original training scheme been implemented?
- c) Do the trainees show measureable gains in knowledge and understanding, attitude and skills?
- d) Should the training programme or any parts of the programme be revised, continued or terminated for future?

The data to be used for answering the above mentioned questions may be obtained by the use of tests, impressions of the trainers and trainees' comments of observers, etc

An important point to remember in gathering data for evaluation purpose at all stages is timing. Test should not be given when the trainees are tired or already to go home or to do some exciting activities such as before or after the field trip.

iv) **Follow-up Activities**

The follow-up activities will be more meaningful and interesting if the trainees and trainers plan and work them out before the training programme is over. The trainees have the knowledge of his role before and after the training, while the trainers have the experience and expertise needed in follow-up. Some follow-up activities are given below

a) **Using a two-way communication system**

A regular two-way communication through newsletters, reports, seminars, workshops etc could be maintained to

remind the trainees about the activities conducted, the problems and their solutions available

b) **Field Visits**

The visit to the trainees should be planned a head. Some of the visits should not be known to the trainees, so that the trainers could have first hand information. Some information which could not be collected through questionnaire and some answers to questions not considered in the training programme may be discussed. Field visit could be made effective, if they are visited, especially when persons from other agencies or other countries are brought along. Field visits also help in verifying some of the evaluation results.

c) **Conducting refresher courses or inviting them in some programmes**

Refresher courses of shorter duration covering emerging areas or new strategies may be organized. Some of the trainees may be invited in some workshops, seminars etc.

CHAPTER - 10

CO-CURRICULAR ACTIVITIES IN POPULATION EDUCATION

Introduction

The major emphasis of all kinds of co-curricular activities is to promote learning through creative self-expression and simultaneously offering satisfaction, relaxation and recreation to the learners. Co-curricular activities promote the spirit of give and take among students and thus, the learning become more interesting and effective. They create favourable setting for the students to develop into mature and responsible citizens. It is in this background that educational planners, administrators and teachers discuss the logistics of promoting the co-curricular activities rather than their need.

Curricular and Co-curricular Activities

All the educational institutions organize curricular as well as co-curricular activities for the all round development of the personality of the learner. In fact, both the activities are supplementary and complementary with each other for the accomplishment of intellectual and emotional growth of the student. The emphasis of curricular activities like classroom teaching is on the content communication resulting in the intellectual growth of the student. The co-curricular activities like study visit, competition and contest not only clarify and strengthen the understanding of the course content but also help to attain favourable attitude formation and value clarification amongst the participants.

Co-curricular activities may, therefore, be defined as the activities that are undertaken to strengthen the classroom learning and also those activities both inside and outside the classroom to develop the personality of the child. They

help in the achievement of aims like aesthetic development, character building, spiritual growth, physical growth, and traits like cooperation, adjustment and speech fluency.

Objectives of Co-curricular Activities

- 1 The main objective of co-curricular activities, in general, is --Learning through Enjoying – students learn through creative self-expression and simultaneously get relaxed and satisfied Learning becomes a joyous experience
2. Co-curricular activities in population education aim at not only in the creation of general awareness but also encourage participants to reflect on various population issues so as to help in building the favourable environment.

Need for Co-curricular Activities in Population Education

The educational innovations like population education aim at the development of rational behaviour in respect of emerging issues and concerns and thus emphasize more on positive attitude formation and value clarification than on knowledge Co-curricular activities have been found of utmost importance in the accomplishment of objectives of an educational innovation owing to reasons summed up below.

1. Integration in Curricular Mechanism is Time Consuming

Integration in regular process of school education is time consuming where as the urgency of the problem demands exposure of the audience at the earliest. Co-curricular activities can meet the demand without waiting its integration in curricular mechanism

2. Generates Demand from Bottom

Organization of co-curricular activities help in generating the demand for new knowledge from the bottom, namely, students, teachers and the community. This makes the task of integration of concerns of sensitive nature in the curriculum and regular courses easy and acceptable. There will be no resistance for teaching those areas to the students and learning will become smooth and effective.

3. Nature and Contents of the Innovation

The nature and the quantum of the educational innovation like population education is such that all the components of it can not be integrated in the textbooks of various school subjects because of the limitations of mother subjects. For the transaction of those "left-over" components, the co-curricular activities may be an effective medium. Moreover, even those components, which are there in the textbooks, may be communicated much more effectively if reinforced through co-curricular activities.

4. Impact Becomes more Permanent

For any educational innovation like population education, to be successful, it is essential that it interests the target group and co-curricular activities help in generating that interest among the target group. The Project Evaluation Study conducted by the IIPS, Bombay also revealed that population education co-curricular activities organized by the NCERT have generated lot of interest not only amongst students and teachers but also amongst the parents and the community. This makes the impact in terms of knowledge gain and attitudinal change among learners/participants comparatively more permanent. Curricular subject are examination oriented and emphasize on cognitive aspect only, whereas the objective of population education is to bring attitudinal, skill development and behavioural changes also. This can be achieved through co-curricular activities which generates lot of interest and among audience.

Types of Activities

1. School Based Activities

These activities are meant primarily for the students and teachers. These may be (a) competitions – essay writing, drawing/painting/poster preparation, debate; (b) story telling, (c) poem recitation, (d) one act play (e) lecture by experts.

2. Community Based Activities

They are meant primarily for the parents and the community, and thus build bridges between the school and the community. These are also called promotional activities. Some of such activities can be (a) Survey, (b) Village/Slum adoption by schools, (c) Setting up Population Education Lab (d) Exhibition, (e) Films/Puppeteers/Dramas/Variety Shows, (f) Prabhat Pheries/Padyatras/ Cycle Rallies/Morning Procession, (g) Observance of important Events/Days/Weeks, and (h) Long Distance Run.

Status of Co-Curricular Activities in Population Education

NCERT has successfully organized a number of population education co-curricular activities during the past few years, viz. An All India Children's Drawing/Painting Competition on Population Situation, Essay Competition, Quiz Competition and Debate Competition – all the four contests were organized at all levels beginning right from school level to District level and then at State level and finally at the National level.

Although efforts were made to ensure community involvement as well to some extent through the organization of the above mentioned activities, launching of Village Adoption Scheme and setting up of Population Education Laboratories in the schools have made substantial contribution in this regard. Also, Observance of Population Education Week, World Population Day and World AIDS Day every year throughout the country has contributed maximum in creating awareness about the elements of population education. Another

important activity, which we have been conducting since 1992, is the National Component of International Poster Contest sponsored by UNFPA.

Innovative Co-curricular Activities

In order to enlarge the coverage of schools and participation of audiences, some innovative co-curricular activities are being conducted during the current phase of the project. Those activities are: Long Distance Run, Special Lecture on Population and Development Education in Schools – “Spel POPDEEDS”, and National Debate Competition¹. Details of each of these activities are available separately. A brief description of each of these activities is given below:

1. Long Distance Run

The Long Distance Run is a race of about 5 km. being organized at district level on World Population Day/AIDS Day. Students of secondary and senior secondary participate in the Run. Each student is provided with a logo having message on population and development issues. This race is absolutely **non-competitive**. A coordination committee headed by the District Commissioner is formed to execute the scheme at their level. Along with the Department of Education, the police authority, the local branch of Sports Authority, the medical personnel all participate in the organization of the activity. The Long Distance Run has proved an effective tool in the building of favourable environment as the community members also participate in the Race as onlookers. The long distance run was started in 1999 and is being organized in many districts so far.

2. Special Lectures on Population and Development Education in Schools (“Spel POPDEEDS”)

The experts in the areas of reproductive health and population and development education deliver lectures on emerging issues to the secondary/senior secondary students. A panel of experts within a vicinity of 200-300 km has been prepared by some states for this purpose.

¹ Details of each of these activities are available separately

These experts will be invited to deliver talks and interact with students on topics like adolescent reproductive health, population situation of the region/country and its implications for sustainable developments, related behaviour of couples, etc. This activity is going to pick up very soon and will strengthen the knowledge base of the students.

3. National Debate Competition

National Debate Competition is organized to involve students in the process of thinking on some critical topics related to population and development. The competition is being organized at five levels starting from school-divisional-state-regional and – national. The topic/theme for debate is identified and then teams present their views for and against the identified topic/theme. For example, the topic of the debate during 1999 was "Empowerment of Women will lead to Population Stabilization in India" and students from as many as 20 States/UTs and Navodaya Vidyalayas participated in the competition. The topic for the year 2000 of the National Debate Competition was "Strict Family Planning Measures Alone is Key to Population Stabilization".

Students' Activities in Adolescence Education

A set of Students' Activities in Adolescence Education are being conducted in Schools so that the process of imparting knowledge in Adolescent Reproductive Health starts in schools without waiting for integration of these elements in the school curriculum. These activities are organized according to the following procedure.

1. Since Students' Activities will be conducted in schools in a phased manner, the first step is the selection of potential schools in each district.
2. Advocacy Meetings are organized for different target groups viz Policy Makers, Educational Administrators, Opinion Leaders, Heads of Schools, Teacher Educators, Teachers, Parents and Media Persons to convince them about the urgent need to impart adolescence education to students.

- 3 Based on the feedback received during advocacy programme on the preparedness, the schools are finally selected.
- 4 Need Assessment Study is conducted to identify certain specific requirements of adolescents belonging to selected schools in order to plan and conduct these innovative activity
- 5 The material is adapted, if found necessary, in view of the findings of the study.
- 6 At least two teachers from each school preferably one male and one female, having alternatively science and social science background are trained intensively with the help of resource persons, counselors/medical experts who would have been adequately oriented in Adolescence Education
- 7 Students' activities are organized in selected schools at regular intervals through out the academic session.
- 8 Counselling of adolescents is done by the trained teachers (and professional counsellors, wherever they are available)
- 9 Peer counselling mode can also be adopted, where feasible. For this, two or three selected students of each school are trained intensively
- 10 The process of conducting these activities and their impact is evaluated at the end of the academic session primarily with a view to effecting improvement in future activities

Conclusion

Right from the inception of the NPEP in 1981, a number of co-curricular activities have been organized in Population Education throughout the country. Co-curricular activities conducted under the project in India is also considered as "Success Story" of the Project highly applauded by the funding international agencies. However, the co-curricular activities of Population Education are yet to become an integral part of the school curricula. This can be achieved only when these activities are dovetailed in the ongoing co-curricular activities of the school system

CHAPTER - 11

EVALUATION AND RESEARCH IN POPULATION EDUCATION

Introduction

In an emerging area like population education much efforts are required to build up not only the knowledge base to serve as a store house for drawing contents for future programming but also a system which could assist to bring improvement in the on-going programmes or to evolve some innovative ideas which could serve as guide for future programme planning and implementation. Most of the countries having national population education programme have built into the programme a systematic mechanism of monitoring, evaluation and research. In spite of all this, the area of evaluation is weak. The area of research is still weaker.

Monitoring, evaluation and research are components of the same continuum. It is desirable to throw some light on their similarities and differences. Whereas monitoring and evaluation are integral part of one single process, research is the higher level of the same continuum. Evaluation and research have some basic differences as well as similarities, which are as follow:

- Both evaluation and research use systematic inquiry techniques but for different purpose.
- Research is theory-oriented, it seeks to prove or disprove certain hypothesis in order to produce new knowledge. Evaluation in contrast, is pragmatic, it judges the worth of the programme.
- Research is basically concerned with the production of new knowledge on the basis of 'facts', verification of old facts, whereas evaluation has an immediate purpose of not only proving but improving the overall performance. If we test teacher's behaviour, we call it evaluation and not

research whereas if we wish to establish any theory on the basis of tested results, establish relationships, discover new ones, we are approaching the domain of research. Whether a study is a evaluation or a research, is decided by its objectives, choice and application of methods, tools, techniques and procedure

Evaluation

The term evaluation has been interpreted in a variety of ways. Some defined it as the collection and use of information to make decision about an educational programme. In its broadest sense, the evaluation is taken as a systematic assessment of the values or worth of a programme or any part of the programme such as the programme as a whole or component of the programme like materials, teaching or training or co-curricular activities

Types of Evaluation

Evaluation is an on-going process which commence even before a programme is launched and continue till the programme continue. The type of evaluation is also decided by the objectives of the programme in population education. Evaluation is done at each stage of the programme development. Evaluation thus can be of three types:

1. Pre-Programme or Diagnostic Evaluation

This type of evaluation is done before or in the initial stage of the programme implementation. It aims at assessing the need for a population education programme. Such evaluation gives a comparative picture of the existing state of affairs and the desired one. It helps in assessing the acceptability of a population education programme to the community. Evidence of community acceptability gathered through evaluation not only help in providing justification of a programme but also strengthen the hands of personnel working for programme implementation. Such

evaluation also help in assessing the feasibility of the programme. It is very essential to prepare financial requirements and know administrative feasibility of a programme before implementation.

2. In-Programme or Formative Evaluation

In-Programme or Formative Evaluation is done while the programme is going on. It is concerned with making decisions relating to the improvement of different components of the programme during implementation stages. Such evaluation aims at:

- i) identifying the strengths and weaknesses of the programme in design and operation during the process of implementation;
- ii) suggesting ways and means for improving the programme.

3. Post-Programme or Summative Evaluation

An assessment of programme carried out on or after the termination of a programme is called summative evaluation. It is thus done for assessing the overall effectiveness of the programme as well as of different components.

Who Should Evaluate?

Another important thing in evaluation is who should be made responsible for evaluating any programme. Generally speaking the educational programmes are evaluated by any or combination of the following:

- 1 Self-evaluation by the participant of the programme.
- 2 Regular monitoring and evaluation of programmes by the programming agency itself.
- 3 Evaluation by outsiders
- 4 Follow-up studies

Tools Used

Evaluation tools include achievement test, attitude scale, questionnaire information schedule etc.

Difficulties Faced in Evaluation

1. Problem of identification of specific objectives.
2. Lack of expertise.
3. Content and evaluation experts work separately
4. Lack of evaluation designs and instruments

Research

Research is a sinquanon of progress in any of human endeavour. Its contribution lies in generating a body of knowledge for designing functionally effective programme of action, in searching solutions to the professional problems encountered in implementing the designed programmes and in stimulating innovations. The research, whatever be its long-term perspective or immediate focus, in ultimate analysis, enriches the operating area. Any country desirous of improving its system or programme undertakes a search into what it has? What it needs to have and how the gaps could be bridged?

Research may be defined as a process of inquiry or investigation into a subject in order to discover or revise facts, theories, application etc. In order that it be systematic, it necessarily involves a plan. A research plan limits the types of things one will do and areas in which they will be carried out. It seeks to prove or disprove certain hypothesis in order to produce new knowledge or new dimension of existing knowledge.

Research is of two types: Basic and Applied. Basic research is done for knowledge's sake where as applied research is done for answering specific problems or questions at a given point of time. In an area like population education, applied research is needed much for bringing out qualitative improvement in different aspects of the programme.

Forms of Research

Research can be classified in many ways. Some classify researches by the *method of data collection*. A project or research in which the sources of data is interview it is called an **interview study** and if it is observation it is called an *observation study*. Similarly researches can be classified with regard to their objectives, like *evaluative research*, *hypothesis testing study*, *comparative research* or *descriptive research*. Some classify researches with regard to time, it is *cross sectional* in nature, if the same respondents or subjects are observed at a single point of time. If respondents are observed at a several point of time, then it is *longitudinal*. There is another type of classification of research which depends on two conditions namely - 1. Internal Validity, 2. External Validity.

1. **Internal Validity (C)** is the degree to which extraneous (or unwanted) variables are controlled so that the researcher is confident that change in the independent variable(s) caused the changes in the dependent variable.

2. **External Validity (S)** is the degree to which the findings of a study can be generalized, to other populations and other settings

An ideal research is that which is strong in both types of validity, however, there may be certain inquiries which may or may not have internal or external validity (Khan, 1976). On the basis of the above said validity researches can be of four types as shown in Table -11.1 below:

TABLE – 11.1 : TYPES OF RESEARCHES

1

Four Classes of Inquiry

| Presence of | | Research Type |
|-------------|-----|---------------|
| S.* | C.* | |
| (-) | (-) | Investigation |
| (+) | (-) | Survey |
| (-) | (+) | Study |
| (+) | (+) | Experiment |

S.* Sampling indicates meeting criteria of External Validity

C.* Control Indicates meeting criteria of Internal Validity

(+) Presence of S* or C*

(-) Absence of S* or C*

Investigation

When a research is conducted without any sample and in natural setting without disturbing the routine, it is called Investigation. If the purpose of research is to give suggestions then investigation is useful

Survey

When the respondents are selected randomly but the controlled group is not there, these types of researches are called Surveys. The typical example of survey in population education is knowledge, attitude practice surveys, which help us describe the parameters of a population or norms of groups. In this type of research we have well defined population where we can apply random sampling technique to draw a group for actual study and thereafter generalize the findings to that population

Study

In a study, proper sampling is not taken into account but the controlled group is there. Such researches are conducted to have rough ideas of a programme and not for generalization. For example to study the effectiveness of a course in population education for a particular group. Here the samples are not representative. Here the control of variables influencing that group is more important.

Experimental

Experimental is an ideal form of research. It has both proper sampling and control of variables. These research areas are conducted to answer cause and effect relationships.

So far research in the area of population education is concerned several pertinent questions need answers - Has some researches in population education been carried out? If so what is their state-of-art? If not what are the gaps? What are the crucial areas of research in population education? Whether research findings are adequate? If not what are the factors responsible for poor utilization? How research utilization can be improved? These questions and many more need serious consideration to improve effectiveness of population education.

Some of these issues arising out of these questions have been discussed here.

Status of Evaluation and Research in Population Education

As said earlier NPEP in India has in-built mechanism of monitoring and evaluation. While the National Steering Committee (NSC), Tripartite Project Review (TPR) and Project Progress Review (PPR) at the national level, the State Advisory Committee (SAC) at the State levels are main monitoring and

evaluation strategies envisaged. In addition, Population Education Cells (PECs) both at the State and National levels have undertaken a few research and evaluation studies. At the national level one study was conducted to evaluate the relative effectiveness of two types of training modalities *National Baseline Surveys* (1980, 1983, 1994) were conducted to know the status of population education in the syllabi and textbooks of different States. *An evaluation study* (1984) was also conducted to know the effectiveness of the curricular and textual material being used in different States/UTs. *An evaluation of National Population Education Project* was conducted by International Institute for Population Sciences (IIPS) (1990) aiming at finding out the strength and weaknesses of organizational support, the effectiveness of curriculum and textual materials and the impact of the programme on students and teachers. *A Mid-term Evaluation of National Population Education Project* was conducted by Society for Applied Research in Population and Development to evaluate the effectiveness of curricular and training materials and assess the strategies adopted for conducting project activities directed towards integration of population education in the teaching-learning process. *Another Baseline Survey* was conducted to know the status of population education in Non-Formal Sector of education. An Intensive Baseline Survey of the selected centres of the State/UT was conducted to identify need and feasibility for implementing population education programme in this sector. Evaluation tools for curriculum textbook lessons, training programme and demonstration lessons were prepared in the beginning of project implementation. During the second cycle, population awareness test, attitude scale and appreciation test for class IX students were prepared at the national level (NCERT, 2003)

So far States are concerned, States have developed tools for material development for teacher training for evaluating learning outcomes of students and teachers. However, most of these tools are yet to be perfected.

No doubt the activities related to evaluation has shown some encouraging trends still lot is to be done in this area. Based on the available evaluation and

research studies a state-of-art was prepared. This has been presented by dividing in three periodicity i.e. from 1970-80, 1981-90 and 1991 to 2000.

Research Trend during 1970-80

First attempt to review and synthesize the available research and evaluation studies was made in 1980. A publication named "*A Decade of Population Education Research in India*" was brought out by NCERT. The total number of studies abstracted were 49 and were broadly classified into:-

1. Knowledge and attitude studies
2. Studies related to sex education
3. Studies related to curriculum development
4. Studies related to teaching methodology
5. Innovations and experimentation.

Out of these 49 studies, 21 studies were related to the description of knowledge attitude and behaviour of students, teachers and parents with regard to population education, 6 studies dealt with the attitude towards sex education, 10, 5, and 7 researches made attempt to deal with various issues related to curriculum and material development, methodology of teaching and innovation and experimentation respectively. Majority of these studies used questionnaire, opinionnaires and interviews as tools and instruments for gathering data. Only two studies, namely, Methodology of Teaching, and the Effectiveness of Two Methodologies, followed experimental design. The following trend emerges.

- Research in population education started in this country in seventies.
- Heavy concentration of exploratory studies involving knowledge, attitude and perception of students, parents and teachers was seen.
- Small purposive sample has been used.
- Majority of researches have used survey or study methodology and very few experimentation studies have been undertaken.

- Variables taken into consideration were age, religion and sex only.
- Variables ignored were socio-economic status, education and occupational status.
- Data in most of the studies were presented in simple percentages and no effort was made to subject the data to any rigorous statistical analysis.
- There was no study related to the teaching-learning process involved in population education, and the training needs of personnel in the field of population education.
- Studies related to curriculum and material development showed that curriculum and materials were developed without the benefit of first finding out the level of student's knowledge, content needs, their readiness to receive population education topics, etc.
- No research study was conducted on conceptualization of population education

Research Trend during 1981-90

The second attempt to compile researches conducted between 1981-90 was made in 1993. A publication titled, "*Population Education Research in India (1981-90) – Inventory and Analysis*" was prepared. In this inventory 86 studies related to various aspect of population education were analysed. Out of which 21 studies were related to knowledge awareness and attitude. Most of these studies were exploratory studies. Three studies have been conducted to find out the effectiveness of teaching methodology and classroom teaching strategies. Seven studies aimed at developing curriculum, finding out the content of population education in syllabi and textbooks. Fifteen studies aimed at measuring the programme evaluation in population education. Only one study was found action oriented dealing with the creation of environmental awareness in students through plantation and protection of trees.

Forty studies were related to issues of population growth, demography, women's education and population growth, family size and family structure, educational background and employment, fertility patterns and impact of child morality on fertility, correlation of age at marriage and literacy status, maternal and child health care pattern and family size.

The following things emerged in the area of evaluation and research in population education:

- ❖ Research in population education was about to complete two decades. Still heavy concentration of researches on exploratory studies involving knowledge and attitude of students towards population education and population issues has been seen.
- ❖ Studies relating to curriculum and material development have also increased
- ❖ Some studies analyzed the contents of population education in syllabi and textbooks and found effective integration in few subjects like geography, economics and biology.
- ❖ A study to identify and develop minimum essential core content in population education was done at the national level
- ❖ Studies relating to the effectiveness of population education instruction and teaching learning in terms of changes in students' knowledge and attitude was undertaken
- ❖ The number of studies finding out the effectiveness of training and teaching methods were still a few in number

Research Trend during 1991-2000

The need for strengthening research and evaluation studies has been recognized and efforts have been made to promote it. A gradual increase has been observed in the number of studies conducted under the Project by the Population Education Cells of SCERTs/SIEs/SIERT. While a total of 9 studies

were conducted before 1980, 34 studies were conducted during 1981-90. A total of 47 studies have been reported between 1991 to 1998.

(a) Studies conducted by NCERT

Population Education Unit, NCERT conducted 26 research and evaluation activities including development of tools since the inception of the Project. Since 1991 there are 14 research and evaluation studies have been conducted by the Central Unit at NCERT and 11 studies by the four Regional Institutes of Education of NCERT. Most of these studies have been related to programme components examining the coverage of population education content in syllabi and textbooks, training effectiveness of co-curricular activities. A study on Needs Assessment of Adolescents has also been undertaken. Another study of an experimental nature focusing on effectiveness of Interactive Strategies on Skill Development in Adolescence Education is in the process. A Comprehensive Project Status Survey (1989-2002) presenting a historical record of the NPEP was also conducted (NCERT, 2003). The survey covers almost all the Project components and indicates the future directions, the project would take during X Five Year Plan. Various tools have also been developed which were used by many States/UTs implementing the Project.

(b) Studies Funded by NCERT

In order to promote research in population education, the need for inviting research proposals was felt. Proposals were invited from various institutions and 11 studies conducted through funding. These are as follows:

1. Population Related Values and Beliefs of Students, Teachers, Community and Ethnic Groups, conducted by Centre for Research, Planning and Action, Delhi 1993.

2. A Study of Impact of Population Education Teaching in Delhi Schools, conducted by MODE, 1993, Delhi.
3. Evaluation of Population Education Programme in the Non-Formal Sector of Education in Tamil Nadu, conducted by Annamalai University, 1996.
4. Beliefs and Attitudes of College Students and Teachers in Kerala Regarding Human Sexuality and Sex Education conducted by P.R.C. University of Kerala, 1994.
5. A Study to probe into Effectiveness of Population Education Project in increasing Family Planning Adoption by MODE, Delhi, 1995
6. An Investigation into the Introduction of Adolescence Education in School Curriculum conducted by SCERT, Hyderabad, 1995.
7. Patterns of Values Related to Family Life Education held by Adolescents and Quality of Family Life conducted by Regional Institute of Education, Mysore, 1995.
8. Small Family Norm. A Study in Concept Formation as a Result of Population Education Instructions Among Students conducted by Organisation for Applied Socio-Economic system (OASES), Delhi, 1997
9. Societal Readiness to Accept the Introduction of Adolescence Education in School Curriculum conducted by Council for Social Development, Delhi, 1998
10. Interest and Awareness of School Teachers on various aspects of Family Planning and Reproduction conducted by Centre for Operation Research and Training, Vadodara, 1997.
11. A Study on Utilization of Resource Persons Trained in Population Education conducted by SCERT, Mizoram, 1995.

Of the 11 studies funded by NCERT, adolescents have been the sample of seven studies. Most of the studies were related to training and programme evaluation. The study conducted by PRC, University of

Kerala (1994) on the beliefs and attitudes of students and teachers regarding human sexuality revealed that students' knowledge about human sexuality and reproductive system was low and recommended sex education as part of the curriculum. RIE, Mysore in its study (1995) on the values related to family life held by adolescents revealed that adolescents prefer marriage based on mutual choice but with the consent of parents. They study on the interests and awareness of students about Family Life and reproduction by the Centre for Operation Research and Training, Baroda (1997) reveals liberal attitude towards sexuality among students from the public schools and boys. The study also showed that many students were becoming sexually active at a very young age. Students' knowledge about the reproductive physiology particularly of the opposite sex was low. Even though all the students had heard about AIDS, there were misconceptions about transmission of HIV/AIDS and 50% were not aware that STDs could be cured with proper timely treatment. The study conducted by Council for Social Development (1998) revealed inadequate knowledge about adolescent related issues and recommended introduction of adolescence education in the curriculum.

Centre for Research Planning and Action (1993) reported the influence of media as source of information. Only 11 per cent students reported teachers as the source of information. The study by OASES (1997) has assessed the attitude towards small family norm assuming that the instructions in population education were important for developing these attitudes.

The study conducted by Population Education Cell, Andhra Pradesh (1995) reported that parents favoured teaching through integrated approach but separately for boys and girls from class VIII onwards.

The study by SCERT, Mirozam (1995) on the utilization of resource persons trained in population education revealed that the State had not effectively utilized the resource persons trained in population education. The resource persons did not feel committed to the task of reorienting

school teachers under their jurisdiction. Lack of time was a major constraint reported. Study has highlighted the need for selection of resource persons, networking with other departments, need for reading materials and continuous updating of resource persons.

Conclusions drawn by some studies have been ambitious. For example the study to assess the effectiveness of population education in increasing family planning adoption conducted by Mode (1995) has correlated teaching of population education on the fertility patterns of women. The study reported difference in women who had studied up to class XII compared with those studied up to class VIII in terms of having institutional deliveries, number of children and spacing.

Annamalai University Centre for Population Studies (1995) evaluated the Population Education Programme in the non-formal sector in Tamil Nadu. The study reported that only 1/5 of the educators had undergone training in population education. The study identified that NFE system lacks uniformity in terms of infrastructure, curriculum and training.

The study of the impact of population education teaching in Delhi schools by MODE (1993) reported that 53 per cent teachers recommended the introduction of population education as a separate and compulsory paper in schools along with sex education. The study suggested training of teachers, introduction of questions in various examinations and the use of innovative teaching methods.

(c) Studies conducted by the State Population Education Cells

1. SCERTs/SIEs/SIERT have Population Education Cells, which have been conducting evaluation and status surveys.
2. Majority of the studies conducted by the SCERTs/SIEs are related to programme evaluation, curriculum and training of teachers.
3. During this period 35 studies on needs assessment of adolescents are conducted by SCERTs/SIEs. Six States, namely, Gujarat, Kerala, Madhya Pradesh, Maharashtra, Orissa and Rajasthan have

conducted a pilot study of an experimental nature on skill development in adolescence education.

4. All the States/UTs implementing the Project conducted Project Status Survey covering almost all the project components from 1980-2002. These status surveys have been summarized and consolidated at the national level
5. Even though some of the studies have selected students as sample for the studies, they have not studied the needs of adolescents. The sample mostly comprised of teachers.
6. Biology teachers were identified as the ideal persons of population education by SCERT, Bihar, 1996.
7. Majority of the studies are surveys and do not use qualitative methodologies to probe into the needs and behaviour of adolescents.
8. Project activities have been evaluated. Observance of Population Education Week was reported to have a positive impact as reported by SIE, U.P., 1995. Under the Laboratory Programme, schools found difficulty to experiment activities due to lack of spare rooms. The village Adoption Programme was not implemented effectively as a very few schools went to the villages for organizing population education activities. This study was conducted by SCERT, Orissa.
9. Significant impact of the content area of population education integrated into the school textbooks was report by a study conducted by SISE, Punjab in 1992. The study revealed that four areas, namely, i) family size and family welfare, ii) delayed marriage, iii) responsible parenthood, and iv) population change and environment have been effective. Two weak areas reported were. i) status of women, and ii) socio-cultural values. SCERT Haryana (1994) reported poor responses related to problems of adolescents and ageing.

Researchable Area Identified

A critical review of researches conducted has found out distinct gaps in some of the important areas of population education (NCERT, 1999). In fact there is a need that research must concentrate more in significant areas of Reconceptualised Population Education using sophisticated research designs. While exploratory studies continued to be important, because of the vastness of the problem, there is a great need to have well organized action researches to help in the implementation of population education. Researches concerning micro level population characteristics are also required. Researchable areas in population education for future research are classified under three broad heads, which are suggestive:

- 1 Content Related Areas
- 2 Approach/Methodology Related Areas and
3. Evaluation/Impact Related Areas.

1. Content Related Areas

- While bio-medical research is necessary, there is need for research in social and behavioural sciences to explore the human dimension and various aspects of socio-cultural values prevalent.
- Importance of 'folk demography' which is dominated by values and beliefs of local people.
- Scope and readiness of the country to accept Adolescence Education in schools.
- Study of gaps between the values held by parents, community and ethnic groups about population matters and values/content taught by the schools.
- Study of comparative cultural analysis of fertility decisions.
- Study of family size and family decision making about fertility.
- Adolescent reproductive and sexual health needs
- Adolescents and their parents Relationships

- Study of peer pressure during adolescence.

2. Approach/Methodology

- ❑ Institutionalization of population education in school system.
- ❑ Comparative study of teaching population education as a separate subject and as integrated with either subject.
- ❑ Effectiveness of curricular and co-curricular approaches.
- ❑ Development of graded curriculum in Reconceptualized Population Education for different stages of school education.
- ❑ Relative effectiveness of different teaching methodologies in population education.
- ❑ Content analysis of syllabi and textbooks with the context of Reconceptualized Population Education.
- ❑ Comparative effectiveness of different methods of training in population education.
- ❑ Cost effectiveness study of different training modalities.
- ❑ Study of level and nature of co-ordination among different departments/organizations/NGO's working in the field of population education.
- ❑ Relative effectiveness of teaching through traditional and value clarification method.
- ❑ Effectiveness of audio-visual materials in terms of changing the awareness and attitude of teachers and students towards population and development issues
- ❑ Assessment of dissemination and utilization of materials in population education
- ❑ A study in concept formation – small family norm – as a result of population education
- ❑ Study on management and supervision and information dissemination in population education.

3. Evaluation/Impact

- Evaluation of different components of population education programme.
- Evaluation of National Population Education Project – A Summative Evaluation.
- Evaluation of teaching learning and training materials.
- Evaluation of different teaching methods used in the classroom situation.
- Evaluation of different training modalities in population education.
- Evaluation of different strategies adopted for implementing the population education programme
- Impact of teaching population education in terms of expected outcomes.
- Impact of teacher training programmes on classroom transaction of population education.
- Impact of population education programme on the knowledge, attitude and skill development in teachers and students.

Utilization of Evaluation and Researches in Population Education

Research findings provide lessons and guidelines to countries for programme to learn from. It enables to identify the weakness and success of the programme and provide useful lessons which can help in improving the programme. Although every country has conducted some kind of research related to population issues, but most of them are not available. Proper and adequate utilization of research results are equally important. In practice, majority of the researches are either under utilized, unutilized or misutilized. They are wind up in library selves to be researched again.

In order to have effective utilization of research results/finding the following steps should be undertaken:

- Efforts should be made for collection and indexing the evaluation and research information.

- Research/evaluation results should be transformed into simple and understandable language.
- State-of-Art of researches should be prepared in the form of abstracts, reports, etc.
- Research should be disseminated regularly through research journals and bulletins.

Thus utilization of research findings will help in enriching the content areas providing support to sensitive messages and giving feedback for effective implementation of the programme.

Difficulties Faced

1. Difficulties related to Time Frame

In population education, answers to research questions are required even before the first step of implementation is taken. But most of the researches (even excluding longitudinal studies) take a long time. In such case, implementation takes place without research support.

Another time frame problem is with formative and summative evaluations. If it is accepted that a major purpose of the programme research is to help suggest changes in the development of content, teaching, learning methodologies, then it follows that studies should be completed before the time these programme decisions are to be made. This means that the timing of variety of activities needs to be very closely coordinated. For example, the time of any study related to curriculum revision must be linked with teacher training, material development, etc. which is difficult to follow.

2. Difficulty Related to Research Professional

Professional researchers are many a time reluctant to undertake the unsophisticated short-term studies which might yield limited yet useful insights into programme activities.

3. Problem Related to Utilization of Research Results

Difficulty arises when researchers complain that their conclusion are ignored. Major part of this problem lies in the fact that both research staff and other programme personnel see research as a difficult activity which require specialized expertise. This attitude tends to isolate research from the programme staff and also therefore, from the programme's needs. Even evaluation is usually considered as an activity to be undertaken at the end of the programme. It is considered simply a way of fulfilling a requirement imposed by an implementing or funding organization

The key factor to overcome this difficulty is that the staff working in population education should recognize that they themselves are capable of performing certain studies and their findings would be of immense value to the programme improvement.

4. Difficulty in Selecting Who Should Evaluate

Whether the evaluation/research should be done by the programme implementor themselves or by outside agencies/institution is another difficulty faced in population education. If research/evaluation is done by them, there can be more link between the programme requirement. If this function is performed by outside institution, a greater degree of objectivity and a wider variety of research expertise is employed. Both the types have advantages and disadvantages.

5. Measurement Difficulty

Difficulty is faced on measuring behaviour which is a long time process. There is also a general lack of research method of controlling all the variables which likely to influence the teaching-learning situations. There is problem of sampling. Again there is a problem of devising tools, which can measure fairly small changes in knowledge or attitude within a population education programme.

6. Establishing Research Priority

Establishing research priority is itself a difficult task. For deciding priority, varied interaction is needed

Role of Project Personnel in Promoting Research/Evaluation

1. Identification of Researchable areas.
2. Inviting (if by commissioning) Research Proposals.
3. Setting up of a Review Committee having research experts.
4. Review of Research Studies.
5. Research Design Format.
 - (i) Title of the Proposal
 - (ii) Objective(s)
 - (iii) Overview of literature
 - (iv) Conceptual Framework
 - (v) Research Questions/Hypotheses
 - (vi) Design of the Study
 - (vii) Universe of the
 - (viii) Sampling Frame
 - (ix) Sampling Procedure
 - (x) Sample Size and Unit of Observation
 - (xi) Control group (if any)
 - (xii) Tools Used
 - (xiii) Data Collection
 - (xiv) Statistical Analysis
 - (xv) Time Budgeting
 - (xvi) Cost Estimation

Conclusion

A concerted beginning to intensive long-term research must be made. Since population education is interdisciplinary, efforts should be made to enlarge the scope of conducting researches by an interdisciplinary team or in close collaboration with them.

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CHAPTER - 12

PROGRAMME MANAGEMENT

What Is Management?

Management is the function of humans, instruments and materials. management deals with three types of resources – people, facilities and funds through a series of functions such as planning, making prospective inputs ready, material production, training, personnel management, taking care of logistics, budgeting, supervising, evaluating and monitoring.

Purposes of Management Functions

The purposes of management functions are as follows:

1. To ensure that each discreet project activity occurs in **the right quantity**, at **the right time**, and is **of acceptable quality** and **reasonable cost**.
2. To overcome the obstacles or constraints that programme implementation confronts.

Major Concerns of Educational Programme Management

The following are the major concerns of educational programme management:

1. The Nature, objectives and strategies of the educational programme;
2. The infrastructure and resources that are available for programme implementation;
3. The nature and ambience of the existing education system in which the programme is implemented; and
4. The network of organisations and institutions which can contribute to the effective implementation of the programme.

National Population Education Programme

The National Population Education Project is being implemented in India since April 1980. Since then it has been implemented in three phases. **The first phase from 1980-85** was devoted primarily to the expansion of project network throughout the country, preparation of basic materials and a large group of trained resource persons at different levels and integration of population education elements in the school curriculum upto secondary stage. **The second phase from 1986-92** addressed to expanding the project network to the remaining states, extending the project activities to cover the higher secondary school stage, integration of population education elements in the teacher education courses, training of a large number of teacher educators, teachers and other functionaries and organisation of co-curricular activities on very large scales. During **the third phase, 1993-97**, project activities focused on integration of population education elements in the non-formal education sector, over and above reinforcing the process of integration in the formal school education and teacher education system, promotion of research, initiation of efforts in the area of adolescence education and reinforcement of the process of organising co-curricular activities.

In the fourth phase (1998-2002), the project responded to the paradigm shift reflected in the Programme of Action adopted by ICPD. The project activities focused on the integration of the elements of the reconceptualised population education.

Now the project has been extended into the X Five Year Plan and Government of India will be funding it.

Long Term Objectives of the Project

Main Objectives

- 1 To Institutionalise the Post-ICPD Reconceptualised Population Education in the school education system.

- 2 To develop awareness and positive attitude towards population and development issues leading to responsible behaviour among students and teachers and, indirectly among parents and the community.
3. To create awareness about adolescent reproductive health - among students, teachers and parents and develop in them healthy attitude towards sex and members of the opposite sex; and
- 4 To contribute to the realisation of India's demographic and health goals which affect the overall development of the country.

Unique Features Of Population Education

Population education programme is somewhat different, confronting problems that are not common to most other educational programmes. It may be that the population education programme faces some problems that may be common to many other educational programmes. But it aims at institutionalising an educational innovation that has certain unique features; and this speciality make its task rather difficult. Those unique features are:

1. Population education as a curricular area does not have a universally accepted and consistently evolved framework. It also lacks a long history of experimental development.
- 2 It is multi-disciplinary area, the knowledge base of which is built by contents drawn from a number of disciplines that have varied conceptual structures.
- 3 In view of the realisation of its critical role as an educational intervention in response to population problems, population education was adopted and introduced in the existing educational system with great rapidity.
- 4 Even after over two decades of its implementation, there is a limited number of educational leaders with extensive experience in population education.

- 5 The population education programme is simultaneously performing several different tasks.
6. Various kinds of project activities are to be conducted in tandem with related activities of the existing system in order to ensure integration of population education elements in them. But the sequence of activities of both may not always be the same.

Role of Programme Managers

1. To be responsible for overall management of the complex series of project activities.
2. To reorient the present population education programme in order to institutionalise the reconceptualised population education and introduce adolescence education in schools.
3. To interpret the mechanics and nuances of the broad framework to those who are managing the school education system and the teacher education system – educational policy makers, curriculum framers, textbook writers material developers, teacher educators, teachers and educational administrators.
- 4 To translate the upper level policies and recommendations to the grass root level, i. e., all aspects of the school education and teacher education and also to relay the 'pulse' of the clientele.
5. To identify some truly innovative experiences and replicate those as well as share with others.

Some crucial considerations

- 1 Middle level Programme Managers occupy critical position to ensure the realisation of the project objectives. They are uniquely placed to make a difference

2. It is essential to remember that the quality of programme management can be improved by employing innovative approaches.
3. There are difficulties because of the nature and ambience of the present system. But one can make a difference
4. We have to change ourselves first to change others. **Think big , start small, act now.**

Management Functions

The Programme Managers of Population Education Project are expected to perform the following key functions :

1. Overall management of the unit which implements the project – (a) ensuring that all the posts have persons in position; (b) there is functional division of work – area wise, project component wise, expertise wise, and activity wise.
2. Planning project activities in view of the needs of overarching project objectives and the decided time-frame and budgetary allocation.
3. Implementing project activities as per the work plan and its time-frame, employing identified strategies and evolving and employing innovative strategies.
4. Coordinating with all the related agencies for effective implementation of project activities.
5. Managing inputs and optimizing inputs to the programme.
6. Optimizing ability of the programme to learn from population education activities in other places (countries, states, organisations).
7. Envisioning and effecting the needed changes in strategies and project inputs based on the feedback received through monitoring

Monitoring Functions

The project personnel have to perform the following monitoring functions .

1. Follow up of every major project activity to ensure its impact on the process of attainment of project objectives;

2. Periodic review of the progress of project implementation and dissemination of the feedback to various organisations/Agencies/ individuals;
3. Periodic meetings of bodies created under the project for monitoring the project implementation;
4. Evaluation of the project activities at regular intervals to get the feedback on the effectiveness of activities and the strategies employed, and
- 5 Regular field visits to ensure effective implementation of the project activities and to identify the strength and weaknesses of the activities and strategies.

Let us get results, not excuses

1. The excuse-making epidemic is contagious,
2. Not just excuses, but "time-wasters" have always been part of an office-procastinators, pessimists, "blamers", reactive thinkers.;
- 3 Once the problem of excuse-making is attacked in a positive way, all other related features disappear;
4. It is essential to resolve .

***LET'S NOT MAKE EXCUSES, LET'S GET RESULTS.
MAKE AT LEAST AN HONEST ATTEMPT.***

TABLE OF HANDY OFFICIAL EXCUSES :

- 1 That is the way we have always done it.
2. I did not know you were in a hurry.
- 3 That is not my department or my job.
4. No one told me to go ahead and do the work
5. I am waiting for an okay
6. How did I know this was different ? No one told me
7. That is his/her job, not mine
8. Wait till the boss comes back and asks for the work.

- 9 We do not make any mistakes.
10. I do not think it was very important.
11. I am so busy I just cannot get around to it.
12. I thought I had already told you.
13. Other members of the team are not doing their assigned job, on which the completion of my work is dependent.
14. What the organisation has done for me that I do anything for it.
15. The boss is under the influence of a cotery, and hence my work is not important for him.

FIVE KEYS TO SUCCESS

1. Shared Goals

The entire team should know where it is going and everyone must be involved in developing the vision. But it must happen gradually; to rush is to court disaster.

2. Shared Culture

All the members of the team should be managed to ensure that everyone understands the Project values.

3. Shared Learning

The staff must not be neglected in any situation. The unwilling, unresponsive and unskilled workers can undermine the best strategies. The shared and continuous learning process has the potentiality to bring about desired improvement

4. Shared Efforts

"Together Everyone Achieves More" Teams are building blocks. Teams should not compete Adopt a looser, more flexible, more efficient "teaming" approach.

5. Shared Information

All information must be shared with the team. Tell the truth at all times. Avoid corporate bureaucratic culture.

SWOT : PROGRAMME ANALYSIS

S : STRENGTH W : WEAKNESS O : OPPORTUNITY T : THREATS

EXECUTING & IMPLEMENTING AGENCIES

NATIONAL LEVEL

| | |
|-------------------------------|-----------------------------------------|
| GOVERNMENT OF INDIA : | FUNDING AGENCY |
| M.H.R.D. : | EXECUTING AGENCY |
| N.C.E.R.T. : | IMPLEMENTING AGENCY |
| NATIONAL STEERING COMMITTEE : | HIGHEST POLICY-MAKING & MONITORING BODY |

| | | |
|-------------|-----|--------------------------------|
| NCTE, CBSE, | :] | SUB-CONTRACTING |
| CISCE, NIOS | | INSTITUTIONS |
| KVS, NVS | | ASSOCIATED FOR |
| COBSE | | COORDINATION WITH STATE BOARDS |

STATE LEVEL

| | |
|----------------------------|-----------------------------------|
| DEPARTMENT OF EDUCATION : | EXECUTING AGENCY |
| SCERTs/SIEs/SIERT : | IMPLEMENTING AGENCIES |
| STATE ADVISORY COMMITTEE : | POLICY MAKING AND MONITORING BODY |

SECTION : III

APPENDICES

APPENDIX - I. PRE - TEST

APPENDIX - II. POST - TEST

PRE - TEST

Name _____

State _____

PART - I

1. Which of the following statements appropriately explains the meaning of population education? (Please tick mark (✓) the correct one).
 - (a) The study of population situation of the world, the country and the state.
 - (b) An educational programme as a response to problems of population and development.
 - (c) An educational programme to control population.
 - (d) An euphemism for sex education
2. Which of the following statements may be accepted as the objective of population education? (Please tick mark (✓) the correct one).
 - (a) To make the learners aware of the Family Planning Programme.
 - (b) To impart education in demography, environmental science, reproductive biology and home science.
 - (c) To make learners understand that population control will solve all the problems of our country, inculcating in them responsible behaviour towards the family size.
 - (d) To make learners aware of the interrelationship between population and development and the critical issues of reproductive health and drug abuse, learning to the development of rational attitude and responsible behaviour among them
3. Which of the following groups of demographic factors indicates the population situation of a developed nation? (Please tick mark (✓) the correct one)
 - (a) Very high birth rate, very high death rate, very high infant mortality rate.
 - (b) Very low birth rate, very low death rate, very low infant mortality rate.
 - (c) Very low birth rate, very high death rate, very high infant mortality rate.
 - (d) Very low birth rate, very low death rate, very high infant mortality rate.
4. Which of the following statements describe the correct feature of Indian population situation according to the 2001 Census? (Please tick mark (✓) the correct statements).
 - (a) Population of literate people is declining whereas that of poor people is growing at a much faster rate.
 - (b) Religion is the most important factor promoting population growth in India.
 - (c) Population growth rate has started declining in India, though the number of young people is very large
 - (d) The sex ratio (933 females per 1000 males) is the lowest since 1901.
 - (e) The rate of urbanization in India is the highest, and the primary reason has been the high birth rate.
 - (f) Although the birth rate has been declining, the total addition to Indian population will continue to be very large because of the population momentum.

5. Which of the following statements do you agree with?
(Mention agree/Disagree/Not sure for each statement)
- (a) People should utilize resources for development in rational way, so that adequate resources are saved for the next generation
 - (b) In order to develop and make their standard of living better, people in India should make full utilization of whatever resources are available.
 - (c) It is more important now to utilize resources for development in order to make the standard of living of Indians as good as the people of the developed nations than to think about the rational use of resources
 - (d) We can attain the goal of sustainable development, if we rationalize the level of consumption of those who are consuming a lot and utilize the resources mainly to remove poverty from the country.
 - (e) The only way to check environmental degradation is to make minimum use of natural resources, even though it adversely affects the required pace of development directed towards removal of poverty.
 - (f) The nation can improve the quality of life of its people by pursuing a policy of sustained economic growth through rational use of resources, and making health and educational facilities available to the people.
6. What is the sex ratio in our country according to the 2001 Census (Please tick mark (✓) the correct one).
- (a) 971 females per 1000 males
 - (b) 1014 females per 1000 males
 - (c) 933 females per 1000 males
 - (d) 853 females per 1000 males
7. With which of the following statements do you agree? (Please tick mark (✓) the correct one)
- (a) Unless the number of females is more than that of males, India cannot attain the status of a developed nation.
 - (b) The status of women in India has always been very high since ancient days
 - (c) The status of women in our country was very high during ancient times, and it started deteriorating in modern days.
 - (d) Unless women are educated and become economically independent, their status will continue to remain low.
 - (e) In Indian society even if women do not earn, their status remains high in the family and society
 - (f) Even if women are employed outside home, they continue to have low status in the family.
 - (g) In order to improve the status of women, it is essential to provide them equal opportunities not only for education, health and employment but also for participation in decision-making.
 - (h) Now-a-days increasing number of families are breaking because women have started asserting their right to take independent decisions about themselves
8. The definition of health given by World Health Organization is that
- (a) Health is a physical, mental well-being with an added spiritual element
 - (b) Health is a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity.
 - (c) Health is a state of complete absence of diseases or infirmities.
9. Please write the names of major national health programmes being implemented in your State
-
-
-
-

- 10 Below are given the names of the States Rank them as per their Literacy rate (as per 2001 Census) and IMR (as per latest SRS) in a descending order.

| <u>Name of the State</u> | <u>Literacy Rate</u> | <u>Infant Mortality Rate</u> | |
|--------------------------|----------------------|------------------------------|--|
| Arunachal Pradesh | | | |
| Bihar | | | |
| Haryana | | | |
| Kerala | | | |
| Rajasthan | | | |
| Uttar Pradesh | | | |

11. What are the basic needs of the members of the family and what are the major functions of the family?

| <u>Needs of Members</u> | <u>Functions of Family</u> |
|-------------------------|----------------------------|
| ----- | ----- |
| ----- | ----- |
| ----- | ----- |

- 12 What are the expected major roles of parents toward adolescents?

13. One of the following four factors is not responsible for urban population growth (Please tick mark (✓) the correct one).

- (a) Natural increase of population
- (b) Migration from rural to urban areas
- (c) Extension of boundaries of towns and cities
- (d) Migration from small towns to big cities

- 14 What are the major consequences of Urbanization/Migration?

15. What are the major factors responsible for migration to urban areas?

- 16 Please state the general objectives of Adolescence Education:

17. Which of the following reasons may be considered most critical for considering adolescence as an important stage of life?
- It is the stage when an adolescent person enters the phase of practical life.
 - During this period the adolescents get more love and affection from their parents.
 - During adolescence boys and girls are free from parental controls.
 - It is the period of crucial physical, emotional, psychological and social growth and development among the growing children.
18. What is the full form of?
- AIDS -----
- HIV -----
19. AIDS is caused by which of the following. (Please tick mark (✓) the correct one).
- virus
 - bacteria
 - fungus
 - protozoa
20. HIV is generally transmitted through which of the following? (Please tick mark (✓) the correct one).
- casual contact
 - blood/body fluid
 - hugging and kissing
 - hand shaking and eating together
21. Read the following statements carefully and tick mark (✓) the correct. Which one of these is not the symptom of Drug Addiction?
- Loss of interest in daily routine
 - Slurring of speech
 - Drowsiness
 - Constant headache

PART - II

1. Please mention five major steps that may ensure effective integration of population education elements into the school curriculum.
- -
 -
 -
2. Please state the steps which are essential for the development of effective print materials in population education
- -
 -
 -
 -
3. Mention important steps to be taken for effective dovetailing of population education in the on-going teacher training programme being regularly conducted by the organization in which you are working
-
-
-
-

4. State the major steps to be taken for integration of population education elements in the pre-service teacher education courses.

5. What are the major problems that one may confront during the process of making efforts for the integration of population education in the on-going teacher training programmes?

- 6 Please state the major problems which one may confront during the development of materials in population education.

7. Mention the important steps that must be taken to make co-curricular activities an integral part of regular school activities.

- 8 State important co-curricular activities which can be regularly organized to reinforce population education in schools.

- 9 Mention the major steps to be taken for getting an evaluation study in population education conducted by others.

10. What according to you are the steps to be taken to promote research in population education?

- 11 State the steps that need to be taken for effective monitoring of population education project activities

- 12 Please prepare a sample Work Plan on one activity under the component of CURRICULUM AND MATERIAL DEVELOPMENT in the format given below.

| Code No. | Objective/Activities | Responsible Authority | Time Schedule | Estimated Expenditure |
|----------|----------------------|-----------------------|---------------|-----------------------|
| | | | | |

- 13 Write below the Budget Line Codes and Items of the Itemized Budget Format.

| Budget Line Code | Item | Budget Estimates |
|------------------|------|------------------|
| | | |

14. What are the major contents of the recent State Project Document on Population and Development Education in Schools?

15. Please write a news items for your Newsletter on activities conducted in your State to observe the World Population Day.

POST - TEST

Name _____

State _____

PART - I

1. Which of the following characteristics were reflected in the original conceptual framework of population education (1971) and the first reconceptualized population education? (Please tick mark (✓) the correct one)
- | <u>Original Framework (1971)</u> | <u>Reconceptualized Framework (1987)</u> |
|----------------------------------|------------------------------------------|
| (a) Value-laden | (a) Value-laden |
| (b) Demography-laden | (b) Demography-laden |
| (c) Developmental focus | (c) Developmental focus |
| (d) Population control focus | (d) Population control focus |
| (e) Content-based | (e) Content-based |
2. Which of the following statements appropriately explains the meaning of population education? (Please tick mark (✓) the correct one).
- (a) The study of population situation of the world, the country and the state
 - (b) An educational programme as a response to problems of population and development.
 - (c) An educational programme to control population.
 - (d) An euphemism for sex education.
3. Which of the following statements may be accepted as the objective of population education? (Please tick mark (✓) the correct one).
- (a) To make the learners aware of the Family Planning Programme.
 - (b) To impart education in demography, environmental science, reproductive biology and home science.
 - (c) To make learners understand that population control will solve all the problems of our country, inculcating in them responsible behaviour towards the family size.
 - (d) To make learners aware of the interrelationship between population and development and the critical issues of reproductive health and drug abuse, learning to the development of rational attitude and responsible behaviour among them
4. Which of the following groups of demographic factors indicates the population situation of a developed nation? (Please tick mark (✓) the correct one).
- (a) Very high birth rate, very high death rate, very high infant mortality rate.
 - (b) Very low birth rate, very low death rate, very low infant mortality rate.
 - (c) Very low birth rate, very high death rate, very high infant mortality rate.
 - (d) Very low birth rate, very low death rate, very high infant mortality rate.
5. Which of the following statements describe the correct feature of Indian population situation according to the 2001 Census? (Please tick mark (✓) the correct statements)
- (a) Population of literate people is declining whereas that of poor people is growing at a much faster rate.

- (b) Religion is the most important factor promoting population growth in India
 - (c) Population growth rate has started declining in India, though the number of young people is very large.
 - (d) The sex ratio (933 females per 1000 males) is the lowest since 1901.
 - (e) The rate of urbanization in India is the highest, and the primary reason has been the high birth rate.
 - (f) Although the birth rate has been declining, the total addition to Indian population will continue to be very large because of the population momentum.
 - (g) India has added 180 million people to its population during the last decade of 1991-2000.
6. Which of the following statements do you agree with?
(Mention agree/Disagree/Not sure for each statement)
- (a) People should utilize resources for development in rational way, so that adequate resources are saved for the next generation.
 - (b) In order to develop and make their standard of living better, people in India should make full utilization of whatever resources are available
 - (c) It is more important now to utilize resources for development in order to make the standard of living of Indians as good as the people of the developed nations than to think about the rational use of resources
 - (d) We can attain the goal of sustainable development, if we rationalize the level of consumption of those who are consuming a lot and utilize the resources mainly to remove poverty from the country.
 - (e) The only way to check environmental degradation is to make minimum use of natural resources, even though it adversely affects the required pace of development directed towards removal of poverty.
 - (f) The nation can improve the quality of life of its people by pursuing a policy of sustained economic growth through rational use of resources, and making health and educational facilities available to the people.
 - (g) sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs
- 7 Out of the following four, only three are essential components of individual development (Please tick mark (✓) the correct statements)
- (a) Equality of opportunity for all people on the society
 - (b) sustainability of such opportunities from one generation to the next
 - (c) Maximum utilization of all available resources by all.
 - (d) Empowerment of people so that they participate in the development process and share the benefits too
- 8 What is the sex ratio in our country according to the 2001 Census (Please tick mark (✓) the correct one).
- (a) 971 females per 1000 males
 - (b) 1014 females per 1000 males
 - (c) 933 females per 1000 males
 - (d) 853 females per 1000 males
- 9 With which of the following statements do you agree? (Please tick mark (✓) the correct statements).
- (a) Unless the number of females is more than that of males, India cannot attain the status of a developed nation

- (b) The status of women in India has always been very high since ancient days.
- (c) The status of women in our country was very high during ancient times; and it started deteriorating in modern days.
- (d) Unless women are educated and become economically independent, their status will continue to remain low.
- (e) In Indian society even if women do not earn, their status remains high in the family and society.
- (f) Even if women are employed outside home, they continue to have low status in the family
- (g) In order to improve the status of women, it is essential to provide them equal opportunities not only for education, health and employment but also for participation in decision-making
- (h) Now-a-days increasing number of families are breaking because women have started asserting their right to take independent decisions about themselves
- (i) 'Gender' and 'Sex' are synonyms and may always be used interchangeably
- (j) 'Gender' refers to those characteristics of males and females that are shaped by social forces, whereas 'Sex' denotes biological differences between them.

10 What is the definition of reproductive health stated in the ICPD Programme of Action?

11 Please write the names of major national health programmes being implemented in your State

12 Below are given the names of the States in India, their literacy rates (as per 2001 Census), and infant mortality rates (SRS 1999) but these rates have not been placed exactly in the order of the States. Please write the exact literacy rates and infant mortality rates in respect of each State.

| <u>Name of the State</u> | <u>Literacy Rate</u> | <u>Infant Mortality Rate</u> |
|--------------------------|----------------------|------------------------------|
| Arunachal Pradesh | 90.9 | 84. |
| Bihar | 57.4 | 81 |
| Haryana | 61.0 | 68 |
| Kerala | 47.5 | 66 |
| Rajasthan | 68.6 | 14 |
| Uttar Pradesh | 54.7 | 43 |

13 What are the basic needs of the members of the family and what are the major functions of the family?

| <u>Needs of Members</u> | <u>Functions of Family</u> |
|-------------------------|----------------------------|
| ----- | ----- |
| ----- | ----- |
| ----- | ----- |

- 14 What are the expected major roles of parents toward adolescents?
-
-
-
-
- 15 One of the following four factors is not responsible for urban population growth (Please tick mark (✓) the correct one).
- (a) Natural increase of population
- (b) Migration from rural to urban areas
- (c) Extension of boundaries of towns and cities
- (d) Migration from small towns to big cities
- 16 What are the major consequences of Urbanization/Migration?
-
-
-
-
- 17 What are the major factors responsible for migration to urban areas?
-
-
-
-
18. Please state the general objectives of Adolescence Education
-
-
-
-
19. Which of the following reasons may be considered most critical for considering adolescence as an important stage of life?
- (a) It is the stage when an adolescent person enters the phase of practical life.
- (b) During this period the adolescents get more love and affection from their parents
- (c) During adolescence boys and girls are free from parental controls
- (d) It is the period of crucial physical, emotional, psychological and social growth and development among the growing children
- 20 What is the full form of?
- AIDS -----
- HIV -----
- 21 AIDS is caused by which of the following (Please tick mark (✓) the correct one)
- (a) virus
- (b) bacteria
- (c) fungus
- (d) protozoa

22. HIV is generally transmitted through which of the following? (Please tick mark (✓) the correct one).
- (a) casual contact
 - (b) blood/body fluid
 - (c) hugging and kissing
 - (d) hand shaking and eating together
23. Read the following statements carefully and tick mark (✓) the correct. Which one of these is not the symptom of Drug Addiction?
- (a) Loss of interest in daily routine
 - (b) Slurring of speech
 - (c) Drowsiness
 - (d) Constant headache

PART – II

- 1 Please mention five major steps that may ensure effective integration of population education elements into the school curriculum
- (a) -----
 - (b) -----
 - (c) -----
 - (d) -----
 - (e) -----
- 2 Please state the steps which are essential for the development of effective print materials in population education
- (a) -----
 - (b) -----
 - (c) -----
 - (d) -----
 - (e) -----
- 3 Mention important steps to be taken for effective dovetailing of population education in the on-going teacher training programme being regularly conducted by the organization in which you are working.
-
-
-
-
4. Mention the important steps that must be taken to make co-curricular activities an integral part of regular school activities
-
-
-
-
5. State important co-curricular activities which can be regularly organized to reinforce population education in schools.
-
-
-
-

6. Mention the major steps to be taken for getting an evaluation study in population education conducted by others.

- 7 Below are given the Code Numbers of the major Components of the Work Plan. Please write the names of the concerned components.

| CODE NO. | COMPONENT |
|----------|-----------|
| 1. | ----- |
| 2. | ----- |
| 3. | ----- |
| 4. | ----- |
| 5. | ----- |
| 6. | ----- |
| 7. | ----- |

8. Below are stated the Budget Line Codes, please write the name of concerned major Components in front of every Code.

| Budget Line Code No. | Description Of Components |
|----------------------|---------------------------|
| 1 | |
| 1.99 | |
| 2 | |
| 2.99 | |
| 3 | |
| 3.99 | |
| 4 | |
| 4.99 | |

PART - III

This part is meant for getting your views on the Training Programme - its academic as well as management aspects. We expect to get your objective views on the following items. Please note that your views expressed here will help our efforts to improve the future Training Programmes. There is a five point scale in respect of each item. Please encircle the point (a,b,c,d,e) which you want to assign to the concerned item.

- 1 How much convenient was the time given to you for sending back the Needs Assessment Questionnaire?
 (a) extremely short (b) considerably short (c) appropriate
 (d) quite convenient (e) quite long

2. What was quality of the Schedule of the Training Programme?
(a) poor (b) average (c) good (d) very good (e) excellent
3. How was the coverage of the essential components of the Needs of Project Implementers given by the training Programme?
(a) poor (b) average (c) good (d) very good (e) excellent
4. How were the training materials provided to the trainees?
a) poor (b) average (c) good (d) very good (e) excellent
5. Kindly comment on the sessions engaged by resource persons on the following topics:
 - (i) Population Education in Schools
(a) poor (b) average (c) good (d) very good (e) excellent
 - (ii) Reconceptualised Framework of Population Education
(a) poor (b) average (c) good (d) very good (e) excellent
 - (iii) Population and Sustainable Development
(a) poor (b) average (c) good (d) very good (e) excellent
 - (iv) Gender Equality and Empowerment of Women
(a) poor (b) average (c) good (d) very good (e) excellent
 - (v) Family · Socio-Economic Factors and Quality of Life
(a) poor (b) average (c) good (d) very good (e) excellent
 - (vi) Population Situation and Development
(a) poor (b) average (c) good (d) very good (e) excellent
 - (vii) Health Nutrition and Education : Key Determinants of Population Change
(a) poor (b) average (c) good (d) very good (e) excellent
 - (viii) Management Information System in Population Education
(a) poor (b) average (c) good (d) very good (e) excellent
 - (ix) Use of Computer in Population Education
(a) poor (b) average (c) good (d) very good (e) excellent
 - (x) Conceptual Framework of Adolescence Education
(a) poor (b) average (c) good (d) very good (e) excellent
 - (xi) Process of Growing Up
(a) poor (b) average (c) good (d) very good (e) excellent
 - (xii) HIV/AIDS and Drug Abuse
(a) poor (b) average (c) good (d) very good (e) excellent
 - (xiv) Material Development in Population Education
(a) poor (b) average (c) good (d) very good (e) excellent
 - (xv) Training in Population Education
(a) poor (b) average (c) good (d) very good (e) excellent

- (xvi) Co-Curricular Activities of Population Education
 (a) poor (b) average (c) good (d) very good (e) excellent
- (xvii) Research and Evaluation in Population Education
 (a) poor (b) average (c) good (d) very good (e) excellent
- (xviii) Project Implementation : Issues of Project Management
 (a) poor (b) average (c) good (d) very good (e) excellent
- (xix) Field Visit
 (a) poor (b) average (c) good (d) very good (e) excellent
- (xx) Practical Works in Groups
 (a) poor (b) average (c) good (d) very good (e) excellent
- (xxi) Activities in Adolescence Education . By Resource Persons
 (a) poor (b) average (c) good (d) very good (e) excellent

6 Please respond to the following items on the managerial dimension of the Programme.

- (i) How was the time available for different sessions?
 (a) Inadequate (b) Adequate
- (ii) How do you rate the participatory modality employed in the Programme?
 (a) poor (b) average (c) good (d) very good (e) excellent
- (iii) How effective was the treatment given to the Roles of Programme Managers?
 (a) poor (b) average (c) good (d) very good (e) excellent
- (iv) How effective were the Group Works?
 (a) poor (b) average (c) good (d) very good (e) excellent
- (v) How was the administrative arrangements made on the venue of the Training Programme?
 (a) poor (b) average (c) good (d) very good (e) excellent

7. Please mention the major shortcomings of the Programme.

8 Please given some suggestions to improve the quality of the Training Programme

